SITE INSPECTION REPORT
FOR
MILES ROAD LANDFILL
TXD980697072
WA # 25-6JZZ

PART B

EPA Project Manager — Date

Project Manager — Date 1/17/93

Team Leader — Date 1/15/93

SITE INSPECTION REPORT
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3.0 SAMPLING INSPECTION RESULTS

Analytical Results Chronology

Fluor Daniel conducted a sampling event that occurred on June 21st and July 12th, 1993. No previous sampling events have been conducted at the site. The focus of the sampling effort was to determine if elevated concentration levels of metals, organics, or cyanides exist at the site. The sampling strategy was to collect near surface (depth 3-6 inches) soil samples at the site and surrounding the site, and to collect ground water/drinking water samples from municipal wells near the site. The sample location map is presented as Figure 3. Samples collected during the field work phase of the SI were shipped to Southwest Labs of Oklahoma (soil inorganic samples), Clayton Environmental Consultants (soil organic samples), and USEPA Houston Office (drinking water samples). Southwest Labs of Oklahoma and Clayton Environmental Consultants are participants in the Contract Laboratory Program (CLP). Analytical results were received from the CLP in Fluor Daniel's Dallas office on August 6 and September 7, 1993 for the inorganic and organic soil samples, respectively. The data validation packages for the inorganic and organic soil sample analyses were completed on October 28, 1993. Analytical results for the drinking water samples were received from USEPA on August 16, 1993.

Quality Control Procedures

During sample collection, Fluor Daniel followed the previously approved sampling and quality assurance project plans for sampling, packaging and shipping samples to the CLP. The analytical packages were evaluated with respect to data completeness and contractual compliance by the Houston EPA Environmental Services Division Surveillance Branch. The soil sample data were then validated by Fluor Daniel to assess the quality assurance/quality control procedures utilized by the laboratory. Data validation was in accordance with the most current USEPA Data Validation Guidelines and regional instructions. The data validation package is included as Attachment 4.

The validation process involves scrutinizing various aspects of analytical procedures to fully assess data quality. Analytical procedures reviewed during the validation process include; 1) laboratory holding time, 2) laboratory equipment calibrations, 3) blanks, 4) interference check, 5) IPC serial dilutions, 6) duplicates, 7) matrix spike recovery, 8) field duplicate samples, 8) internal standards performance, 9) sample verification, 10) compound quantitation and reported detection limits, and 12) system performance. Based on the review of the various aspects of data analysis, the data validator may assign data qualifiers as necessary. The following code letters and the associated definitions are used as data validation qualifiers in Attachment 4:

"B" - Analyte was detected in the method blank for that sample (organic samples). Analyte detected in the method blank at concentrations above the Instrument Detection Limit (IDL) but below the Contract Required Quantitation Limit (CRQL) (inorganic samples).

"U" - An analysis of the analyte was made, but was not detected. The associated numerical value is the sample quantitation limit.

"J" - The associated numerical value is an estimated quantity.

"UJ" - An analysis of the analyte was made, but was not detected. The sample quantitation limit is an estimated quantity.

"N J" - Presumptive evidence of compound presence.

"R" - Data for analyte is unusable.

If no detectable quantities of an analyte were found in any of the samples, then blank spaces for that analyte may be shown in the data validation tables.

The results from the water samples analyzed by USEPA are not required to undergo data validation. The only qualifier given for the EPA data is "ND" which stands for not detected above the given detection limit. The USEPA data results are included as Attachment 5.

Summary Tables

The Sample Summary Table (Table 2) of this Addendum summarizes sample numbers, matrices and locations. The Summary of Inorganic Soil Sample Results Table (Table 3) summarizes station location, TAL inorganic concentrations, standard CLP qualifiers and comments relating results to background concentrations. The Summary of Organic Soil Sample Results Table (Table 4) summarizes station location, TCL organic concentrations, standard CLP qualifiers and comments relating results to background concentrations. The Summary of Ground Water Sample Results Table (Table 5) summarizes station location, TAL inorganic concentrations, and comments relating results to background concentrations.

Discussion of Results

Soil Samples

A total of 12 soil matrix samples were collected and analyzed for Target Analyte List (TAL) metals and cyanide, and Target Compound List (TCL) organic compounds (volatile organics, semivolatile organics, and PCB & Pesticides). Sample analyses indicate that there are no elevated levels of volatile organics or semivolatile organics in the surface soils surrounding the site, and no elevated concentrations of any TCL organics in the drinking water wells near the site. There were eight TAL metals and six TCL pesticides that were found above their respective BBCs for on-site soils (summarized in Tables 3 and 4, respectively). Additionally, there were four TAL metals found to be above their respective BBCs at the apparent down gradien(b) (6)Well (summarized in Table 5). Background sample results and three times background results are also presented for comparison.

The background soil samples were taken as part of the concurrent Castle Drive and Miles Road Landfill (TXD980750368) SI. Two background soil samples were collected. The background soil sample data is provided as Attachment 6. Analyte concentrations that represent the three times the average background concentration are designated in this report as Background Benchmark Concentrations (BBC). When the background samples

did not indicate a concentration above the detection limit, the detection limit is designated as the BBC. When analytical data for one of these background soil samples notes that an analyte was not detected and the other background soil sample indicates that an analyte is present at a given concentration, then for the purposes of BBC determination the three times the concentration of the sample with the known concentration is used as the BBC.

TAL metals that exceeded the BBC, except for nickel, were only observed in soil samples SS02, SS03, SS04 and SS05. The soil sample TAL metals that exceeded the BBC are cadmium, chromium, copper, lead, mercury, nickel, silver and zinc. The BBC was also exceeded for calcium; however, calcium is not listed in the Superfund Chemical Data Matrix (SCDM) and it is not presented in Table 3. The highest exceedance for each of the inorganic analytes occurred in sample SS03, except for nickel (SS07). Samples SS04 and SS05 were sample matrix duplicates and each had exceedances for cadmium, copper and zinc. There was no significant geographical pattern of widespread BBC exceedances found at the site; however sample SS03 did have a significant number of analytes with exceedances.

Analytes that exceeded the BBC for nickel were observed at sample locations SS01, SS03, SS06, and SS07. These exceedances are due to the background sample being below the detection limit (21 ppm). The range of concentrations for the samples with exceedances is 22.0 to 24.1 ppm. The background soil concentration range for nickel in the northeastern Texas area is generally between 10 and 30 ppm (Ref. 24). The nickel soil concentration range for soils in the Garland area have been found to range from 11 to 30 ppm (Refs. 25, 26, 27) Therefore, the nickel concentrations found at this site are considered within the normal background concentration range.

No volatile organic or semivolatile organic compounds were found to exceed the detection limit (BBC) of the analytical tests used. Six pesticides were found to exceed the detection limit (BBC) of the analytical tests used. These six pesticides are heptachlor epoxide, Dieldrin, 4,4'-DDE, 4,4'-DDD, alpha-chlordane, and gamma-chlordane. Exceedances were found in samples SS03, SS04 and SS05. The highest exceedances for

each of the pesticides occurred at sample location SS03. Sample SS04 and sample SS05, which was the field method duplicate of sample SS04, had exceedances for 4,4'-DDD (SS04 only) and alpha- and gamma-chlordane. There was no significant pattern of widespread BBC exceedances found at the site; however, similar to the inorganic result sample location SS03 had the highest number of analytes with exceedances. Samples SS03 and SS04 & SS05 were not taken in order, therefore, the potential for sample cross contamination is negligible.

The following known Tentatively Identified Compounds (TICs) were identified in the organic analysis of the soil samples: n-methyl 1-octanamine; 2-pentanone, 4-hydroxy-4-met[hyl] (diacetone alcohol); hydroperoxide, 1,1-dimethyl[ethyl] (tert butyl-hydroperoxide); 4-penten-2-ol; 2-methyl-2,3-pentadiol; 2-butanol, 1-methoxy; octane, 2,4,6-trimethyl; octacosane; 3-heptanone; hexanedioic acid, mono(2-eth[yl?]); 2-propanoic acid, 2-methyl-,[?]; glycine, n-methyl-n-(1,oxodo[?]); 3-hydroxy-2-pentanone; ethanol, 2,2'-oxybis-diace[?]; tetradecane; hexanedioic acid, dioctyl es[ter?]; and pentadecane. A few of the TIC data are qualified as "J" and all of the rest are qualified as "NJ" or "BNJ". These TICs, as determined by CAS number review, are not substances that are listed in the SCDM.

Drinking Water Samples

A total of four ground water/drinking water samples were collected from two separate locations and analyzed for TAL metals and cyanide, and TCL organic compounds (volatile organics, semi-volatile organics, and PCB/Pesticides). Data are presented in summary Table 5 for four metals. Background sample results and three times background results are also presented for comparison. Analyte concentrations that represent the three times the background concentration are designated in this report as Background Benchmark Concentrations (BBC). When the background samples did not indicate a concentration above the detection limit, the detection limit is designated as the BBC.

Copper, magnesium, manganese, and zinc were found to exceed their BBCs for water samples collected at th(b) (6) Well (STA13 and STA14). Th(b) (6) Well sample was collected at a tap; therefore, the copper and zinc concentrations could be from pipe or

fixture corrosion (copper or galvanized pipes or brass fixtures). Additionally, potassium was found to be above the BBC for one of the (b) (6) Well samples (STA13 only). Potassium is not listed in the SCDM and is not included in the Table 5. All other metal and cyanide contents were under the BBCs determined from the background sample collected at the (b) Well (Attachment 5). The background water contained detectable concentrations of the following metals: aluminum, barium, calcium, iron, magnesium and sodium. None of the inorganic contaminants detected in any of the water samples are above their respective drinking water Maximum Contaminant Limits (MCLs). Copper and zinc were found to be above their respective BBCs at the site and at the (b) (6) Well.

No TCL organics, except for a single incidence (STA14) of bis-(2-Ethylhexyl)Phthalate (44 ug/l), were detected at either of the two well sites. Bis-(2-Ethylhexyl)Phthalate is a common lab contaminate. Additionally, the bis-(2-Ethylhexyl)Phthalate result was not repeated in the duplicate (b) (6) Well sample (STA13). The (b) (6) Well (STA16) was noted to have one unknown semivolatile TIC with an estimated concentration of 8 ug/l. No other volatile organic, semivolatile organic, or PCB/Pesticide compounds were found at either well. No TCL organics were indicated above BBC in the drinking water samples collected from sources adjacent to the site.

Summary

The Miles Road Landfill is located adjacent to Miles Road in northeast Garland, Dallas County, Texas. The site was leased by the City of Garland for use as a municipal landfill between February 1973 to June 1975 (Ref. 2). The landfill portion of the site is owned by Vaughn McCallum (Ref. 5) and is approximately 30 acres in size (Ref. 1). The site is now being used as a sheep pasture and for horse feed (coastal grass) production.

No known prior sampling has been conducted at the site or from the drinking water wells adjacent to the site. Analytical results from the SI sampling effort are summarized in Tables 3, 4, and 5. Sample analyses indicate that there are no elevated levels of volatile organics or semi-volatile organics in the surface soils surrounding the site or in the drinking water wells near the site. No BBC exceedances were found in the samples taken

from the surface water pathway. Eight metals and six pesticides were found above their respective BBCs for on-site soils. Additionally, there were four metals found to be above their respective BBCs at the down gradien[redacted]Well. Two of these metals (magnesium and manganese) were not found in soil samples and are therefore not considered attributable to the site. Additionally, nickel BBC exceedances for the site have been determined to be within the normal range of background concentrations for soils in the Garland area.

No pattern of exceedance was found on-site. While sample location SS03 was found to have the most significant inorganic and pesticide exceedances surrounding samples SS02, SS06 and SS07 (Figure 3) did not have exceedances of these same compounds. In fact the other sampling location (SS04 & SS05) that did have similar exceedances was approximately 1000 feet south of SS03.

The ground water migration pathway is of minor concern considering the minimal ground water use in the area and the low soil permability in the site area. Elevated concentrations of copper, magnesium, manganese and zinc were found in the down gradien[redacted]Well. These metals were found in low concentrations (i.e. under respecti[redacted]) and are addressed as having a minimal impact on the ground water pathway. Additionally, these metals may not be attributable to the site. The manganese and magnesium, which were not found above the BBC concentrations for on-site soils, are not considered attributable to the site. The copper and zinc, which were found to be in exceedance for on-site soil samples, are considered to be attributable to the site.

The surface water/overland flow migration pathway is of some concern due to the extensive use of surface water along the 15 mile downstream segment (i.e. drinking water intake on Lake Ray Hubbard). Potential surface water migration could affect the drinking water to 1.6 million Dallas Water Utilities customers (Ref. 21). There is additional concern regarding the consumption of fish taken by recreational fisherman, and the impacts to sensitive environments (i.e. wetlands) along the surface water pathway. However, the overland flow distance from the site to Rowlett Creek (3500 feet, Ref. 1) and the fact that

overland flow distance from the site to Rowlett Creek (3500 feet, Ref. 1) and the fact that the site is not in a floodplain (Ref. 9) minimizes the risk to the surface water migration pathway.

The soil exposure pathway is of minor concern for this site. The significant exposure route is ingestion. Skin exposure is limited due to the thick grass vegetation of the site. Although the McCallum residences are adjacent to the landfill, the sampling locations having BBC exceedances are greater than 200 feet from these residences (Figure 3). The threat to off-site population is limited due to the lack of access to the site, the low population surrounding the site, and the low potential for sediment migration.

The air migration pathway is of minor concern. The site has a low nearby population and there are no nearby designated sensitive environments. No gas releases were observed at the site and no TCL volatile organic compounds were found in the surface soil samples at the site. Therefore, the air pathway threat is limited to airborne constituents caused by wind generated surface soil particulate entrainment. The site is well vegetated; therefore, the potential for wind generated particulate releases is limited.

4.0 REFERENCES

1. U.S. Geological Survey, 7.5 minute topographic map, Rowlett, Tex., 1959 (photorevised 1968 and 1973).

2. Texas Department of Health, "Potential Hazardous Waste Site Identification and Preliminary Assessment", February 24, 1981.

5. Record of Telephone Conversation between Tom Casabonne, Fluor Daniel, and Ken Smith, Landfill Director City of Garland Sanitation Department. March 16, 1993.

9. Federal Emergency Management Agency, Flood Insurance Rate Maps, Garland, Texas, Community-Panel Number 485471 0020 D, Map Revised Date August 15, 1990.

21. Record of Telephone Conversation between Tom Casabonne, Fluor Daniel, and Rene Caraveo, Environmental Monitoring Manager, City of Dallas Water Utilities, June 7, 1993.

24. U.S. Department of the Interior, Geologic Survey, Professional Paper 574-D "Elemental Composition of Surficial Materials in the Conterminous United States", H. T. Shacklette et. al., 1971.

25. Inorganic Soil Data Validation Package for Miller Road Landfill, October 27, 1993.

26. Inorganic Soil Data Validation Package for Castle Drive and Miles Road Landfill, October 28, 1993.

27. Inorganic Soil Data Validation Package for East Garland Road Landfill, October 6, 1993.

FIGURES

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FIGURE 3
SAMPLE LOCATIONS

TABLES

TABLE 2
SAMPLE SUMMARY TABLE

[illegible]

TABLE 2
SAMPLE SUMMARY TABLE
Miles Road Landfill
Sampling: Soil-June 21, 1993/Drinking Water-July 12, 1993

Sample Number	CLP Number (Sample Number)	Matrix	Location
SS01	FAA31, MFAP47	SOIL	MILES LANDFILL (ON-SITE) - SOUTHWEST CORNER
SS02	FAA34, MFAP50	SOIL	MILES LANDFILL (ON-SITE) - WESTERN EDGE
SS03	FAA37, MFAP53	SOIL	MILES LANDFILL (ON-SITE) - NORTHWEST CORNER
SS04	FAA35, MFAP51	SOIL	MILES LANDFILL (ON-SITE) - SOUTH MIDDLE
SS05	FAA32, MFAP48	SOIL	MILES LANDFILL (ON-SITE) - SOUTH MIDDLE DUPLICATE OF SS04
SS06	FAA36, MFAP52	SOIL	MILES LANDFILL (ON-SITE) - MIDDLE
SS07	FAA33, MFAP49	SOIL	MILES LANDFILL (ON-SITE) - NORTHEAST CORNER
SS08	FAA38, MFAP54	SOIL	MILES LANDFILL (OFF-SITE) - WITHIN 200 FEET OF RESIDENCES JUST EAST OF LANDFILL CELLS
SD09	FAA39, MFAP55	SOIL/SEDIMENT	MILES LANDFILL (OFF-SITE) - NORTHERN EDGE OF POND ON MCCALLUM PROPERTY
SD10	FAA40, MFAP56	SOIL/SEDIMENT	MILES LANDFILL (OFF-SITE) - JUST SOUTHWEST OF LANDFILL IN DRAINAGE FEATURE ALONG MILES ROAD
SD11	FAA41, MFAP57	SOIL/SEDIMENT	UPSTREAM OF PPE ON ROWLETT CREEK
SD12	FAA42, MFAP58	SOIL/SEDIMENT	ROWLETT CREEK PPE
STA13	3TFADW4001	DRINKING WATER	TRIMBLE WELL DOWN GRADIENT DRINKING WATER WELL SAMPLE
STA14	3TFADW4002	DRINKING WATER	TRIMBLE WELL DUPLICATE
STA15	3TFADW4003	TRIP BLANK	TRIP BLANK COLLECTED AT [redacted] WELL
STA16	3TFADW4004	DRINKING WATER	[redacted] WELL BACKGROUND DRINKING WATER WELL SAMPLE

SS - Soil Sample
SD - Soil/Sediment Sample
STA - Drinking Water Sample
FAA - Organic Sample Number
MFAP - Inorganic Sample Number
3TFADW - Drinking Water Sample Number

TABLE 3
SUMMARY OF INORGANIC SOIL SAMPLE RESULTS

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TABLE 3
SUMMARY OF INORGANIC SOIL SAMPLE RESULTS
MILES ROAD LANDFILL
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Sample Number	Compound or Element	Concentration (mg/kg)	Qualifier	CLP Traffic Number	Comments
CASTLE MILES SS10 & SS11	Cadmium	2.0	U	MFAP88, MFAP89	AVERAGE OF BACKGROUND SAMPLES TAKEN AS PART OF THE CASTLE MILES LANDFILL SI AT CHURCH AND RESIDENCE ACROSS CASTLE DRIVE FROM OPERATING LANDFILL LOCATED APPROXIMATELY 3000 FEET SOUTH OF THE MILES LANDFILL
	Chromium	25.45			
	Copper	10.6			
	Lead	18.05			
	Mercury	0.20	U		
	Nickel	21.0	U		
	Silver	3.0	U		
	Zinc	39.5			
CASTLE MILES SS10 & SS11	Cadmium	2.0	U	MFAP88, MFAP89	BACKGROUND BENCHMARK CONCENTRATION (BBC) (3 X BACKGROUND CONCENTRATION OR SAMPLE DETECTION LIMIT)
	Chromium	76.35			
	Copper	31.8			
	Lead	54.15			
	Mercury	0.20	U		
	Nickel	21.0	U		
	Silver	3.0	U		
	Zinc	118.5			
SS01	Cadmium	4.0	U	MFAP47	MILES LANDFILL (ON-SITE) SOUTHWEST CORNER
	Chromium	14.1	J		
	Copper	15	J		
	Lead	18.3			
	Mercury	0.20	U		
	Nickel	23.7			
	Silver	5.0	U		
	Zinc	59.7	J		
SS02	Cadmium	4.0	U	MFAP50	MILES LANDFILL (ON-SITE) WESTERN EDGE
	Chromium	12.4	J		
	Copper	9.5	J		
	Lead	31.4			
	Mercury	0.20	U		
	Nickel	11.1			
	Silver	5.0	U		
	Zinc	28.7	J		
SS03	Cadmium	10.9	J	MFAP53	MILES LANDFILL (ON-SITE) NORTHWEST CORNER
	Chromium	91.7	J		
	Copper	91.8	J		
	Lead	87.3			
	Mercury	0.40			
	Nickel	22.9			
	Silver	5.3			
	Zinc	233	J		
SS04	Cadmium	4.5	J	MFAP51	MILES LANDFILL (ON-SITE) SOUTH MIDDLE
	Chromium	38.9	J		
	Copper	46.8	J		
	Lead	29.5			
	Mercury	0.20	U		
	Nickel	17.7			
	Silver	5.0	U		
	Zinc	142	J		

J - The associated value is an estimated quantity.
U - The material was analyzed for but not detected above the level of the associated value.
_ - The associated value is greater than the BBC.

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TABLE 3 (cont'd)
SUMMARY OF INORGANIC SOIL SAMPLE RESULTS
MILES ROAD LANDFILL

Sample Number	Compound or Element	Concentration (mg/kg)	Qualifier	CLP Traffic Number	Comments
CASTLE MILES SS10 & SS11	Cadmium	2.0	U	MFAP88, MFAP89	AVERAGE OF BACKGROUND SAMPLES TAKEN AS PART OF THE CASTLE MILES LANDFILL SI AT CHURCH AND RESIDENCE ACROSS CASTLE DRIVE FROM OPERATING LANDFILL LOCATED APPROXIMATELY 3000 FEET SOUTH OF THE MILES LANDFILL
	Chromium	25.45			
	Copper	10.6			
	Lead	18.05			
	Mercury	0.20	U		
	Nickel	21.0	U		
	Silver	3.0	U		
	Zinc	39.5			
CASTLE MILES SS10 & SS11	Cadmium	2.0	U	MFAP88, MFAP89	BACKGROUND BENCHMARK CONCENTRATION (BBC) (3 X BACKGROUND CONCENTRATION OR SAMPLE DETECTION LIMIT)
	Chromium	76.35			
	Copper	31.8			
	Lead	54.15			
	Mercury	0.20	U		
	Nickel	21.0	U		
	Silver	3.0	U		
	Zinc	118.5			
SS05	Cadmium	7.4	J	MFAP48	MILES LANDFILL (ON-SITE) SOUTH MIDDLE DUPLICATE OF SS04
	Chromium	60.5	J		
	Copper	74.2	J		
	Lead	28.0			
	Mercury	0.20	U		
	Nickel	20.1			
	Silver	5.0	U		
	Zinc	180	J		
SS06	Cadmium	4.0	U	MFAP52	MILES LANDFILL (ON-SITE) MIDDLE
	Chromium	16.2	J		
	Copper	21.4	J		
	Lead	28.4			
	Mercury	0.20	U		
	Nickel	22.0			
	Silver	5.0	U		
	Zinc	75.6	J		
SS07	Cadmium	4.0	U	MFAP49	MILES LANDFILL (ON-SITE) NORTHEAST CORNER
	Chromium	19.9	J		
	Copper	19.6	J		
	Lead	23.1			
	Mercury	0.20	U		
	Nickel	24.1			
	Silver	5.0	U		
	Zinc	74.5	J		
SS08	Cadmium	4.0		MFAP54	MILES LANDFILL (OFF-SITE) WITHIN 200 FEET OF RESIDENCES JUST EAST OF LANDFILL CELLS
	Chromium	14.1	J		
	Copper	13.8	J		
	Lead	22.0			
	Mercury	0.20	U		
	Nickel	16.1			
	Silver	5.0	U		
	Zinc	65.5	J		

J - The associated value is an estimated quantity.
U - The material was analyzed for but not detected above the level of the associated value.
__ - The associated value is greater than the BBC.

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TABLE 3 (cont'd)
SUMMARY OF INORGANIC SOIL SAMPLE RESULTS
MILES ROAD LANDFILL
page 3 of 3

Sample Number	Compound or Element	Concentration (mg/kg)	Qualifier	CLP Traffic Number	Comments
CASTLE MILES SS10 & SS11	Cadmium	2.0	U	MFAP88, MFAP89	AVERAGE OF BACKGROUND SAMPLES TAKEN AS PART OF THE CASTLE MILES LANDFILL SI AT CHURCH AND RESIDENCE ACROSS CASTLE DRIVE FROM OPERATING LANDFILL LOCATED APPROXIMATELY 3000 FEET SOUTH OF THE MILES LANDFILL
	Chromium	25.45			
	Copper	10.6			
	Lead	18.05			
	Mercury	0.20	U		
	Nickel	21.0	U		
	Silver	3.0	U		
	Zinc	39.5			
CASTLE MILES SS10 & SS11	Cadmium	2.0	U	MFAP88, MFAP89	BACKGROUND BENCHMARK CONCENTRATION (BBC) (3 X BACKGROUND CONCENTRATION OR SAMPLE DETECTION LIMIT)
	Chromium	76.35			
	Copper	31.8			
	Lead	54.15			
	Mercury	0.20	U		
	Nickel	21.0	U		
	Silver	3.0	U		
	Zinc	118.5			
SD09	Cadmium	4.0	U	MFAP55	MILES LANDFILL (OFF-SITE) NORTHERN EDGE OF POND ON MCCALLUM PROPERTY
	Chromium	14.0	J		
	Copper	16.3	J		
	Lead	17.8			
	Mercury	0.20	U		
	Nickel	19.6			
	Silver	5.0	U		
	Zinc	81.0	J		
SD10	Cadmium	4.0	U	MFAP56	MILES LANDFILL (OFF-SITE) JUST SOUTHWEST OF LANDFILL IN DRAINAGE FEATURE ALONG MILES ROAD
	Chromium	12.6	J		
	Copper	12.5	J		
	Lead	30.6			
	Mercury	0.20	U		
	Nickel	20.2			
	Silver	5.0	U		
	Zinc	51.6	J		
SD11	Cadmium	4.0	U	MFAP57	UPSTREAM OF PPE ON ROWLETT CREEK
	Chromium	7.7	J		
	Copper	10.4	J		
	Lead	10.8			
	Mercury	0.20	U		
	Nickel	18.7			
	Silver	5.0	U		
	Zinc	42.2	J		
SD12	Cadmium	4.0	U	MFAP58	ROWLETT CREEK PPE
	Chromium	10.7	J		
	Copper	9.9	J		
	Lead	14.8			
	Mercury	0.20	U		
	Nickel	16.7			
	Silver	5.0	U		
	Zinc	40.4	J		

J - The associated value is an estimated quantity.
U - The material was analyzed for but not detected above the level of the associated value.
__ - The associated value is greater than the BBC.

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TABLE 4
SUMMARY OF ORGANIC SOIL SAMPLE RESULTS

TABLE 4
SUMMARY OF ORGANIC SOIL SAMPLE RESULTS
MILES ROAD LANDFILL

Sample Number	Compound or Element	Concentration (ug/kg)	Qualifier	CLP Traffic Number	Comments
CASTLE MILES SS10 & SS11	Heptachlor epoxide	1.9	U	FAA72, FAA73	AVERAGE OF BACKGROUND SAMPLES TAKEN AS PART OF THE CASTLE MILES LANDFILL SI AT CHURCH AND RESIDENCE ACROSS CASTLE DRIVE FROM OPERATING LANDFILL LOCATED APPROXIMATELY 3000 FEET SOUTH OF THE MILES LANDFILL
	Dieldrin	3.6	U		
	4,4'-DDE	3.6	U		
	4,4'-DDD	3.6	U		
	α-chlordane	1.9	U		
	γ-chlordane	1.9	U		
CASTLE MILES SS10 & SS11	Heptachlor epoxide	1.9	U	FAA72, FAA73	BACKGROUND BENCHMARK CONCENTRATION (BBC) (3 X BACKGROUND CONCENTRATION OR SAMPLE DETECTION LIMIT)
	Dieldrin	3.6	U		
	4,4'-DDE	3.6	U		
	4,4'-DDD	3.6	U		
	α-chlordane	1.9	U		
	γ-chlordane	1.9	U		
SS01	Heptachlor epoxide	2.1	U	FAA31	MILES LANDFILL (ON-SITE) SOUTHWEST CORNER
	Dieldrin	4.1	U		
	4,4'-DDE	4.1	U		
	4,4'-DDD	4.1	U		
	α-chlordane	2.1	U		
	γ-chlordane	2.1	U		
SS02	Heptachlor epoxide	2.1	U	FAA34	MILES LANDFILL (ON-SITE) WESTERN EDGE WEST SIDE
	Dieldrin	4.1	U		
	4,4'-DDE	4.1	U		
	4,4'-DDD	4.1	U		
	α-chlordane	2.1	U		
	γ-chlordane	2.1	U		
SS03	Heptachlor epoxide	7.6		FAA37	MILES LANDFILL (ON-SITE) NORTHWEST CORNER
	Dieldrin	44			
	4,4'-DDE	6.2			
	4,4'-DDD	34			
	α-chlordane	140			
	γ-chlordane	210			
SS04	Heptachlor epoxide	2.2	U	FAA35	MILES LANDFILL (ON-SITE) SOUTH MIDDLE
	Dieldrin	4.2	U		
	4,4'-DDE	4.2	U		
	4,4'-DDD	5.1			
	α-chlordane	7.9			
	γ-chlordane	7.6			

J - The associated value is an estimated quantity.
U - The material was analyzed for but not detected above the level of the associated value.
__ - The associated value is greater than the BBC.

TABLE 4 (cont'd)
SUMMARY OF ORGANIC SOIL SAMPLE RESULTS
MILES ROAD LANDFILL
page 2 of 3

Sample Number	Compound or Element	Concentration (ug/kg)	Qualifier	CLP Traffic Number	Comments
CASTLE MILES SS10 & SS11	Heptachlor epoxide	1.9	U	FAA72, FAA73	AVERAGE OF BACKGROUND SAMPLES TAKEN AS PART OF THE CASTLE MILES LANDFILL SI AT CHURCH AND RESIDENCE ACROSS CASTLE DRIVE FROM OPERATING LANDFILL LOCATED APPROXIMATELY 3000 FEET SOUTH OF THE MILES LANDFILL
	Dieldrin	3.6	U		
	4,4'-DDE	3.6	U		
	4,4'-DDD	3.6	U		
	α-chlordane	1.9	U		
	γ-chlordane	1.9	U		
CASTLE MILES SS10 & SS11	Heptachlor epoxide	1.9	U	FAA72, FAA73	BACKGROUND BENCHMARK CONCENTRATION (BBC) (3 X BACKGROUND CONCENTRATION OR SAMPLE DETECTION LIMIT)
	Dieldrin	3.6	U		
	4,4'-DDE	3.6	U		
	4,4'-DDD	3.6	U		
	α-chlordane	1.9	U		
	γ-chlordane	1.9	U		
SS05	Heptachlor epoxide	2.2	U	FAA32	MILES LANDFILL (ON-SITE) SOUTH MIDDLE DUPLICATE OF SS04
	Dieldrin	4.3	U		
	4,4'-DDE	4.3	U		
	4,4'-DDD	4.3	U		
	α-chlordane	4.6			
	γ-chlordane	4.5			
SS06	Heptachlor epoxide	2.2	U	FAA36	MILES LANDFILL (ON-SITE) MIDDLE
	Dieldrin	4.2	U		
	4,4'-DDE	4.2	U		
	4,4'-DDD	4.2	U		
	α-chlordane	2.2	U		
	γ-chlordane	2.2	U		
SS07	Heptachlor epoxide	2.2	U	FAA33	MILES LANDFILL (ON-SITE) NORTHEAST CORNER
	Dieldrin	4.2	U		
	4,4'-DDE	4.2	U		
	4,4'-DDD	4.2	U		
	α-chlordane	2.2	U		
	γ-chlordane	2.2	U		
SS08	Heptachlor epoxide	2.1	U	FAA38	MILES LANDFILL (OFF-SITE) WITHIN 200 FEET OF RESIDENCES JUST EAST OF LANDFILL CELLS
	Dieldrin	4	U		
	4,4'-DDE	4	U		
	4,4'-DDD	4	U		
	α-chlordane	2.1	U		
	γ-chlordane	2.1	U		

J - The associated value is an estimated quantity.
U - The material was analyzed for but not detected above the level of the associated value.
___ - The associated value is greater than the BBC.

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TABLE 4 (cont'd)
SUMMARY OF ORGANIC SOIL SAMPLE RESULTS
MILES ROAD LANDFILL

Sample Number	Compound or Element	Concentration (ug/kg)	Qualifier	CLP Traffic Number	Comments
CASTLE MILES SS10 & SS11	Heptachlor epoxide	1.9	U	FAA72, FAA73	AVERAGE OF BACKGROUND SAMPLES TAKEN AS PART OF THE CASTLE MILES LANDFILL SI AT CHURCH AND RESIDENCE ACROSS CASTLE DRIVE FROM OPERATING LANDFILL LOCATED APPROXIMATELY 3000 FEET SOUTH OF THE MILES LANDFILL
	Dieldrin	3.6	U		
	4,4'-DDE	3.6	U		
	4,4'-DDD	3.6	U		
	α-chlordane	1.9	U		
	γ-chlordane	1.9	U		
CASTLE MILES SS10 & SS11	Heptachlor epoxide	1.9	U	FAA72, FAA73	BACKGROUND BENCHMARK CONCENTRATION (BBC) (3 X BACKGROUND CONCENTRATION OR SAMPLE DETECTION LIMIT)
	Dieldrin	3.6	U		
	4,4'-DDE	3.6	U		
	4,4'-DDD	3.6	U		
	α-chlordane	1.9	U		
	γ-chlordane	1.9	U		
SD09	Heptachlor epoxide	2.2	U	FAA39	MILES LANDFILL (OFF-SITE) NORTHERN EDGE OF POND ON MCCALLUM PROPERTY
	Dieldrin	4.2	U		
	4,4'-DDE	4.2	U		
	4,4'-DDD	4.2	U		
	α-chlordane	2.2	U		
	γ-chlordane	2.2	U		
SD10	Heptachlor epoxide	2	U	FAA40	MILES LANDFILL (OFF-SITE) JUST SOUTHWEST OF LANDFILL IN DRAINAGE FEATURE ALONG MILES ROAD
	Dieldrin	3.8	U		
	4,4'-DDE	3.8	U		
	4,4'-DDD	3.8	U		
	α-chlordane	2	U		
	γ-chlordane	2	U		
SD11	Heptachlor epoxide	2.2	U	FAA41	UPSTREAM OF PPE ON ROWLETT CREEK
	Dieldrin	4.2	U		
	4,4'-DDE	4.2	U		
	4,4'-DDD	4.2	U		
	α-chlordane	2.2	U		
	γ-chlordane	2.2	U		
SD12	Heptachlor epoxide	2.3	U	FAA42	ROWLETT CREEK PPE
	Dieldrin	4.4	U		
	4,4'-DDE	4.4	U		
	4,4'-DDD	4.4	U		
	α-chlordane	2.3	U		
	γ-chlordane	2.3	U		

J - The associated value is an estimated quantity.
U - The material was analyzed for but not detected above the level of the associated value.
__ - The associated value is greater than the BBC.

TABLE 5
SUMMARY OF DRINKING WATER SAMPLE RESULTS

TABLE 5
SUMMARY OF DRINKING WATER SAMPLE RESULTS[1]
MILES ROAD LANDFILL

Sample Number	Compound or Element	Concentration (ug/L)	CLP Traffic Number	Comments
STA16	Copper Magnesium Manganese Zinc	20 (ND) 5190 5 (ND) 20 (ND)	3TFADW4004	BACKGROUND SAMPLE RESULTS FROM THE [redacted] WELL.
STA16	Copper Magnesium Manganese Zinc	20 (ND) 15570 5 (ND) 20 (ND)	3TFADW4004	BENCHMARK BACKGROUND CONCENTRATIONS (BBCs) ARE 3X BACKGROUND CONCENTRATION OR THE DETECTION LIMIT IF COMPOUND IS NOT DETECTED.
STA13	Copper Magnesium Manganese Zinc	24 16300 21 191	3TFADW4001	[redacted] WELL
STA14	Copper Magnesium Manganese Zinc	29 16900 21 199	3TFADW4002	[redacted] WELL DUPLICATE

[1] This summary presents metals data for the drinking water samples.
__ - A double underline is used to show constituents that are above their respective BBCs.
ND - Not Detected above the value listed.

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ATTACHMENT 4
SOIL SAMPLE DATA VALIDATION PACKAGE

ATTACHMENT 5
DRINKING WATER SAMPLE DATA

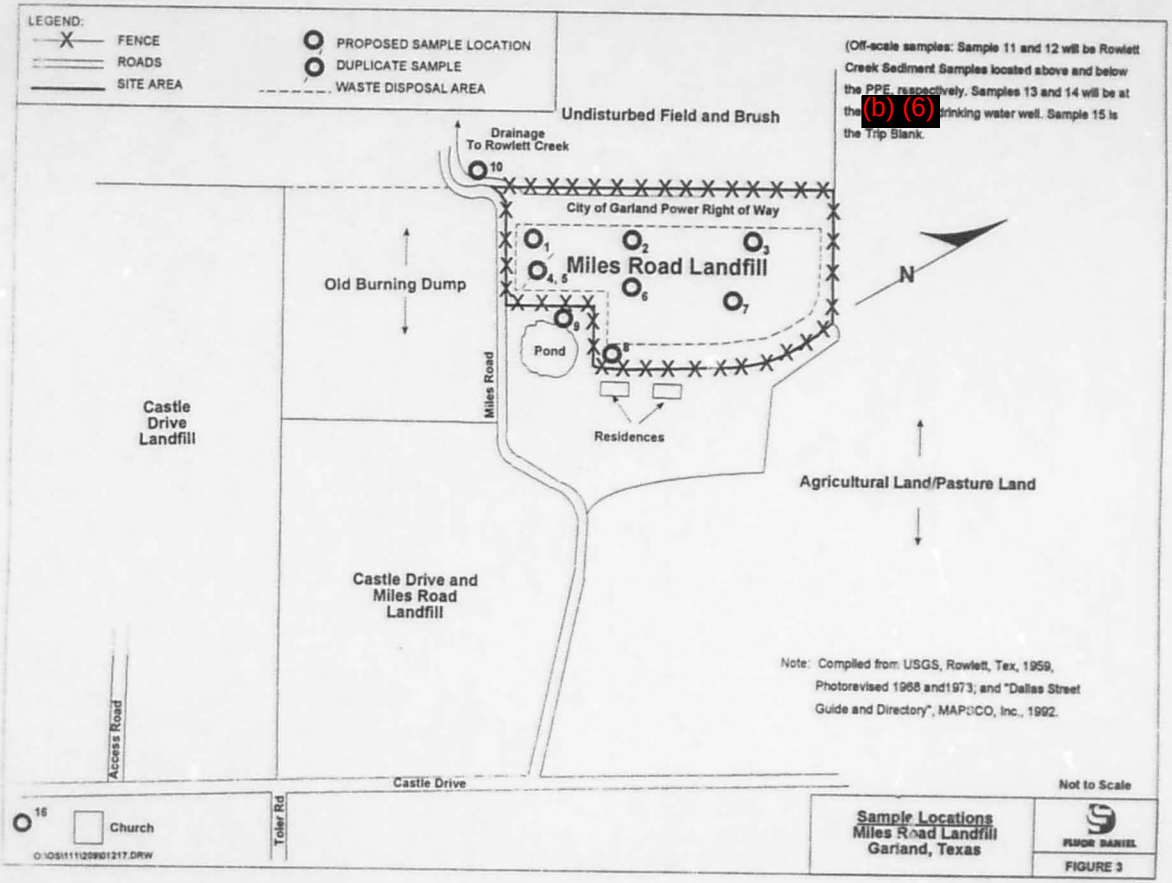
[illegible]

ATTACHMENT 6
BACKGROUND SOIL SAMPLE DATA VALIDATION FOR THE CASTLE DRIVE AND MILES ROAD LANDFILL

FIGURES

FIGURE 3
SAMPLE LOCATIONS

[illegible]


LEGEND:
FENCE
ROADS
SITE AREA
PROPOSED SAMPLE LOCATION
DUPLICATE SAMPLE
WASTE DISPOSAL AREA
(Off-scale samples: Sample 11 and 12 will be Rowlett Creek Sediment Samples located above and below the PPE, respectively. Samples 13 and 14 will be at the [redacted] drinking water well. Sample 15 is the Trip Blank.
(b) (6)
Undisturbed Field and Brush
Drainage To Rowlett Creek
10
City of Garland Power Right of Way
1
2
3
4, 5
6
7
8
9
Miles Road Landfill
Old Burning Dump
Pond
Miles Road
N
Castle Drive Landfill
Residences
Agricultural Land/Pasture Land
Castle Drive and Miles Road Landfill
Note: Compiled from: USGS, Rowlett, Tex, 1959, Photorevised 1968 and1973; and "Dallas Street Guide and Directory", MAPSCO, Inc., 1992.
Access Road
Castle Drive
Not to Scale
16
Church
Toler Rd
O:\OSI\111209\01217.DRW
Sample Locations
Miles Road Landfill
Garland, Texas
FLUOR DANIEL
FIGURE 3

TABLES

TABLE 2
SAMPLE SUMMARY TABLE

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TABLE 3
SUMMARY OF INORGANIC SOIL SAMPLE RESULTS

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TABLE 3 (cont'd)
SUMMARY OF INORGANIC SOIL SAMPLE RESULTS
MILES ROAD LANDFILL
page 2 of 3

Sample Number	Compound or Element	Concentration (mg/kg)	Qualifier	CLP Traffic Number	Comments
CASTLE MILES SS10 & SS11	Cadmium	2.0	U	MFAP88, MFAP89	AVERAGE OF BACKGROUND SAMPLES TAKEN AS PART OF THE CASTLE MILES LANDFILL SI AT CHURCH AND RESIDENCE ACROSS CASTLE DRIVE FROM OPERATING LANDFILL LOCATED APPROXIMATELY 3000 FEET SOUTH OF THE MILES LANDFILL
	Chromium	25.45			
	Copper	10.6			
	Lead	18.05			
	Mercury	0.20	U		
	Nickel	21.0	U		
	Silver	3.0	U		
	Zinc	39.5			
CASTLE MILES SS10 & SS11	Cadmium	2.0	U	MFAP88, MFAP89	BACKGROUND BENCHMARK CONCENTRATION (BBC) (3 X BACKGROUND CONCENTRATION OR SAMPLE DETECTION LIMIT)
	Chromium	76.35			
	Copper	31.8			
	Lead	54.15			
	Mercury	0.20	U		
	Nickel	21.0	U		
	Silver	3.0	U		
	Zinc	118.5			
SS05	Cadmium	7.4	J	MFAP48	MILES LANDFILL (ON-SITE) SOUTH MIDDLE DUPLICATE OF SS04
	Chromium	60.5	J		
	Copper	74.2	J		
	Lead	28.0			
	Mercury	0.20	U		
	Nickel	20.1			
	Silver	5.0	U		
	Zinc	180	J		
SS06	Cadmium	4.0	U	MFAP52	MILES LANDFILL (ON-SITE) MIDDLE
	Chromium	16.2	J		
	Copper	21.4	J		
	Lead	28.4			
	Mercury	0.20	U		
	Nickel	22.0			
	Silver	5.0	U		
	Zinc	75.6	J		
SS07	Cadmium	4.0	U	MFAP49	MILES LANDFILL (ON-SITE) NORTHEAST CORNER
	Chromium	19.9	J		
	Copper	19.6	J		
	Lead	23.1			
	Mercury	0.20	U		
	Nickel	24.1			
	Silver	5.0	U		
	Zinc	74.5	J		
SS08	Cadmium	4.0		MFAP54	MILES LANDFILL (OFF-SITE) WITHIN 200 FEET OF RESIDENCES JUST EAST OF LANDFILL CELLS
	Chromium	14.1	J		
	Copper	13.8	J		
	Lead	22.0			
	Mercury	0.20	U		
	Nickel	16.1			
	Silver	5.0	U		
	Zinc	65.5	J		

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_ - The associated value is greater than the BBC.

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TABLE 4
SUMMARY OF ORGANIC SOIL SAMPLE RESULTS

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TABLE 4
SUMMARY OF ORGANIC SOIL SAMPLE RESULTS
MILES ROAD LANDFILL

Sample Number	Compound or Element	Concentration (ug/kg)	Qualifier	CLP Traffic Number	Comments
CASTLE MILES SS10 & SS11	Heptachlor epoxide	1.9	U	FAA72, FAA73	AVERAGE OF BACKGROUND SAMPLES TAKEN AS PART OF THE CASTLE MILES LANDFILL SI AT CHURCH AND RESIDENCE ACROSS CASTLE DRIVE FROM OPERATING LANDFILL LOCATED APPROXIMATELY 3000 FEET SOUTH OF THE MILES LANDFILL
	Dieldrin	3.6	U		
	4,4'-DDE	3.6	U		
	4,4'-DDD	3.6	U		
	α-chlordane	1.9	U		
	γ-chlordane	1.9	U		
CASTLE MILES SS10 & SS11	Heptachlor epoxide	1.9	U	FAA72, FAA73	BACKGROUND BENCHMARK CONCENTRATION (BBC) (3 X BACKGROUND CONCENTRATION OR SAMPLE DETECTION LIMIT)
	Dieldrin	3.6	U		
	4,4'-DDE	3.6	U		
	4,4'-DDD	3.6	U		
	α-chlordane	1.9	U		
	γ-chlordane	1.9	U		
SS01	Heptachlor epoxide	2.1	U	FAA31	MILES LANDFILL (ON-SITE) SOUTHWEST CORNER
	Dieldrin	4.1	U		
	4,4'-DDE	4.1	U		
	4,4'-DDD	4.1	U		
	α-chlordane	2.1	U		
	γ-chlordane	2.1	U		
SS02	Heptachlor epoxide	2.1	U	FAA34	MILES LANDFILL (ON-SITE) WESTERN EDGE WEST SIDE
	Dieldrin	4.1	U		
	4,4'-DDE	4.1	U		
	4,4'-DDD	4.1	U		
	α-chlordane	2.1	U		
	γ-chlordane	2.1	U		
SS03	Heptachlor epoxide	7.6		FAA37	MILES LANDFILL (ON-SITE) NORTHWEST CORNER
	Dieldrin	44			
	4,4'-DDE	6.2			
	4,4'-DDD	34			
	α-chlordane	140			
	γ-chlordane	210			
SS04	Heptachlor epoxide	2.2	U	FAA35	MILES LANDFILL (ON-SITE) SOUTH MIDDLE
	Dieldrin	4.2	U		
	4,4'-DDE	4.2	U		
	4,4'-DDD	5.1			
	α-chlordane	7.9			
	γ-chlordane	7.6			

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U - The material was analyzed for but not detected above the level of the associated value.
___ - The associated value is greater than the BBC.

TABLE 4 (cont'd)
SUMMARY OF ORGANIC SOIL SAMPLE RESULTS
MILES ROAD LANDFILL

Sample Number	Compound or Element	Concentration (ug/kg)	Qualifier	CLP Traffic Number	Comments
CASTLE	Heptachlor			FAA72,	AVERAGE OF BACKGROUND SAMPLES
MILES	epoxide	1.9	U	FAA73	TAKEN AS PART OF THE CASTLE MILES
SS10 &	Dieldrin	3.6	U		LANDFILL SI AT CHURCH AND RESIDENCE
SS11	4,4'-DDE	3.6	U		ACROSS CASTLE DRIVE FROM OPERATING
	4,4'-DDD	3.6	U		LANDFILL LOCATED APPROXIMATELY 3000
	α-chlordane	1.9	U		FEET SOUTH OF THE MILES LANDFILL
	γ-chlordane	1.9	U		
CASTLE	Heptachlor			FAA72,	BACKGROUND BENCHMARK
MILES	epoxide	1.9	U	FAA73	CONCENTRATION (BBC)
SS10 &	Dieldrin	3.6	U		(3 X BACKGROUND CONCENTRATION
SS11	4,4'-DDE	3.6	U		OR SAMPLE DETECTION LIMIT)
	4,4'-DDD	3.6	U		
	α-chlordane	1.9	U		
	γ-chlordane	1.9	U		
SS05	Heptachlor			FAA32	MILES LANDFILL (ON-SITE)
	epoxide	2.2	U		SOUTH MIDDLE
	Dieldrin	4.3	U		DUPLICATE OF SS04
	4,4'-DDE	4.3	U		
	4,4'-DDD	4.3	U		
	α-chlordane	4.6			
	γ-chlordane	4.5			
SS06	Heptachlor			FAA36	MILES LANDFILL (ON-SITE)
	epoxide	2.2	U		MIDDLE
	Dieldrin	4.2	U		
	4,4'-DDE	4.2	U		
	4,4'-DDD	4.2	U		
	α-chlordane	2.2	U		
	γ-chlordane	2.2	U		
SS07	Heptachlor			FAA33	MILES LANDFILL (ON-SITE)
	epoxide	2.2	U		NORTHEAST CORNER
	Dieldrin	4.2	U		
	4,4'-DDE	4.2	U		
	4,4'-DDD	4.2	U		
	α-chlordane	2.2	U		
	γ-chlordane	2.2	U		
SS08	Heptachlor			FAA38	MILES LANDFILL (OFF-SITE)
	epoxide	2.1	U		WITHIN 200 FEET OF RESIDENCES JUST
	Dieldrin	4	U		EAST OF LANDFILL CELLS
	4,4'-DDE	4	U		
	4,4'-DDD	4	U		
	α-chlordane	2.1	U		
	γ-chlordane	2.1	U		

J - The associated value is an estimated quantity.
U - The material was analyzed for but not detected above the level of the associated value.
__ - The associated value is greater than the BBC.

TABLE 4 (cont'd)
SUMMARY OF ORGANIC SOIL SAMPLE RESULTS
MILES ROAD LANDFILL
page 3 of 3

Sample Number	Compound or Element	Concentration (µg/kg)	Qualifier	CLP Traffic Number	Comments
CASTLE MILES SS10 & SS11	Heptachlor epoxide	1.9	U	FAA72, FAA73	AVERAGE OF BACKGROUND SAMPLES TAKEN AS PART OF THE CASTLE MILES LANDFILL SI AT CHURCH AND RESIDENCE ACROSS CASTLE DRIVE FROM OPERATING LANDFILL LOCATED APPROXIMATELY 3000 FEET SOUTH OF THE MILES LANDFILL
	Dieldrin	3.6	U		
	4,4'-DDE	3.6	U		
	4,4'-DDD	3.6	U		
	α-chlordane	1.9	U		
	γ-chlordane	1.9	U		
CASTLE MILES SS10 & SS11	Heptachlor epoxide	1.9	U	FAA72, FAA73	BACKGROUND BENCHMARK CONCENTRATION (BBC) (3 X BACKGROUND CONCENTRATION OR SAMPLE DETECTION LIMIT)
	Dieldrin	3.6	U		
	4,4'-DDE	3.6	U		
	4,4'-DDD	3.6	U		
	α-chlordane	1.9	U		
	γ-chlordane	1.9	U		
SD09	Heptachlor epoxide	2.2	U	FAA39	MILES LANDFILL (OFF-SITE) NORTHERN EDGE OF POND ON MCCALLUM PROPERTY
	Dieldrin	4.2	U		
	4,4'-DDE	4.2	U		
	4,4'-DDD	4.2	U		
	α-chlordane	2.2	U		
	γ-chlordane	2.2	U		
SD10	Heptachlor epoxide	2	U	FAA40	MILES LANDFILL (OFF-SITE) JUST SOUTHWEST OF LANDFILL IN DRAINAGE FEATURE ALONG MILES ROAD
	Dieldrin	3.8	U		
	4,4'-DDE	3.8	U		
	4,4'-DDD	3.8	U		
	α-chlordane	2	U		
	γ-chlordane	2	U		
SD11	Heptachlor epoxide	2.2	U	FAA41	UPSTREAM OF PPE ON ROWLETT CREEK
	Dieldrin	4.2	U		
	4,4'-DDE	4.2	U		
	4,4'-DDD	4.2	U		
	α-chlordane	2.2	U		
	γ-chlordane	2.2	U		
SD12	Heptachlor epoxide	2.3	U	FAA42	ROWLETT CREEK PPE
	Dieldrin	4.4	U		
	4,4'-DDE	4.4	U		
	4,4'-DDD	4.4	U		
	α-chlordane	2.3	U		
	γ-chlordane	2.3	U		

J - The associated value is an estimated quantity.
U - The material was analyzed for but not detected above the level of the associated value.
__ - The associated value is greater than the BBC.

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TABLE 5

SUMMARY OF DRINKING WATER SAMPLE RESULTS

TABLE 5
SUMMARY OF DRINKING WATER SAMPLE RESULTS[1]
MILES ROAD LANDFILL

Sample Number	Compound or Element	Concentration (ug/L)	CLP Traffic Number	Comments
STA16	Copper Magnesium Manganese Zinc	20 (ND) 5190 5 (ND) 20 (ND)	3TFADW4004	BACKGROUND SAMPLE RESULTS FROM THE HARRIS WELL.
STA16	Copper Magnesium Manganese Zinc	20 (ND) 15570 5 (ND) 20 (ND)	3TFADW4004	BENCHMARK BACKGROUND CONCENTRATIONS (BBCs) ARE 3X BACKGROUND CONCENTRATION OR THE DETECTION LIMIT IF COMPOUND IS NOT DETECTED.
STA13	Copper Magnesium Manganese Zinc	24 16300 21 191	3TFADW4001	[redacted] WELL
STA14	Copper Magnesium Manganese Zinc	29 16900 21 199	3TFADW4002	[redacted] WELL DUPLICATE

[1] This summary presents metals data for the drinking water samples.
__ - A double underline is used to show constituents that are above their respective BBCs.
ND - Not Detected above the value listed.

ATTACHMENT 4
SOIL SAMPLE DATA VALIDATION PACKAGE

[illegible]

DATA QUALITY ASSURANCE REVIEW

Site Name:	Miles Rd. LF
Site Code:	TXD980697072
Case Number:	20258
Laboratory:	Silver Analytical Inc. - Kellogg, Idaho
Soil Samples:	MFAP47, MFAP48, MFAP49, MFAP50, MFAP51, MFAP52, MFAP53, MFAP54, MFAP55, MFAP56, MFAP57, MFAP58

The data package consisted of 12 soil samples and one duplicate sample analyzed for TCL metals and cyanide:

1. Analytical Parameters: All samples were analyzed using multi-media, multi-concentration protocols.

2. Holding Times: All holding times were met.

3. Calibration Verification: All initial calibration verification results were within control limits. All continuing calibration verifications were conducted at the proper frequency and the results were within the control limits.

4. Blanks: All blanks were less than or equal to the IDL, except for vanadium. Analyte detected in blanks above IDL. All samples have analyte concentrations less than five times the IDL and these were flagged (B).

5. Matrix Spike Recoveries: %R for antimony is beyond acceptable limits, however, sample data was not affected.

   %R for cadmium, chromium, copper, and zinc is <75%. Samples were listed as (J).

6. Duplicates: All analytes except zinc were within control limits. Zinc analyte data was flagged as (J).

7. Laboratory Control Samples: Quality control criteria were met in all samples.

8. ICP Interference Check Sample (ICS): ICP interference check samples were analyzed at the specified frequency and the results were within control limits.

9. ICP Serial Dilution: Quality control criteria were met in all samples. The %D listed for beryllium was incorrectly calculated to be 100.0. The correct value should be 42.0.

10. Furnace AA: The correlation coefficient for lead on sample MFAP53 was less than 0.995, as such, the analyte was flagged (J). All other samples met the quality control criteria.

11. Sample Result Verification: Data package had no missing or incorrectly numbered page.

12. Overall Assessment of Data: The data package was acceptable except for matrix spikes which affected the analytes cadmium, chromium, copper, and zinc.

28-Oct-93

CHEMICAL DATA SUMMARY

Site Name and Code: Miles Road Landfill,TXD980697072
Case Number: 20258
Concentrations in milligrams/kilogram (mg/kg)
Compiled by: Fluor Daniel,Inc.

Traffic Number:	MFAP47		MFAP48		MFAP49		MFAP50		MFAP51		MFAP52		MFAP53		
Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		
Percent Solids	77.9		73.4		76.6		78.6		74.8		75.2		70.3		
Location:	SS-01		SS-05		SS-07		SS-02		SS-04		SS-06		SS-03		
and or Sample Description:									FIELD DUPLICATE OF MFAP48						
COMPOUND NAME	**CAS NO.**	**CLASS**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**
ALUMINUM	7429-90-5	INO	13,700.00		19,000.00		17,900.00		15,700.00		15,100.00		12,200.00		14,800.00	
ANTIMONY	7440-36-0	INO														
ARSENIC	7440-38-2	INO	4.30		7.60		4.30		9.40		3.30		3.50		5.10	
BARIUM	7440-39-3	INO	173.00		149.00		151.00		196.00		176.00		132.00		162.00	
BERYLLIUM	7440-41-7	INO														
CADMIUM	7440-43-9	INO	4.00	U	7.40	J	4.00	U	4.00	U	4.50	J	4.00	U	10.90	J
CALCIUM	7440-70-2	INO	71,800.00		81,700.00		56,300.00		13,400.00		77,300.00		47,500.00		54,900.00	
CHROMIUM	7440-47-3	INO	14.10	J	60.50	J	19.90	J	12.40	J	38.90	J	19.20	J	91.70	J
COBALT	7440-48-4	INO	11.50		7.50		12.70		9.00		7.70		10.40		8.80	
COPPER	7440-50-8	INO	15.00	J	74.20	J	19.60	J	9.50	J	46.80	J	21.40	J	91.80	J
IRON	7439-89-6	INO	18,700.00		18,900.00		20,800.00		10,100.00		18,200.00		17,000.00		16,900.00	
LEAD	7439-92-1	INO	18.30		28.00		23.10		31.40		29.50		26.40		87.30	
MAGNESIUM	7439-95-4	INO	4,690.00		5,790.00		4,380.00		1,950.00		5,180.00		3,790.00		3,870.00	
MANGANESE	7439-96-5	INO	628.00		305.00		556.00		367.00		305.00		411.00		256.00	
MERCURY	7439-97-6	INO	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.20	U	0.40	
NICKEL	7440-02-0	INO	23.70		20.10		24.10		11.10		17.70		22.00		22.90	
POTASSIUM	7440-09-7	INO	1,830.00		2,510.00		2,330.00		947.00		2,060.00		1,840.00		1,820.00	
SELENIUM	7782-49-2	INO														
SILVER	7440-22-4	INO	5.00	U	5.00	U	5.00	U	5.00	U	5.00	U	5.00	U	5.30	
SODIUM	7440-23-5	INO	134.00		424.00		114.00		186.00		382.00		153.00		459.00	
THALLIUM	7440-28-0	INO														
VANADIUM	7440-62-2	INO	37.70	B	40.50	B	43.20	B	32.70	B	34.30	B	36.10	B	37.60	B
ZINC	7440-66-6	INO	59.70	J	180.00	J	74.50	J	28.70	J	142.00	J	75.60	J	233.00	J
CYANIDE		INO	10.00	U	10.00	U	10.00	U	10.00	U	10.00	U	10.00	U	10.00	U

LEGEND
INO – Inorganic
B – Blank interference. Analyte conc. <5x blank conc.
J – The associated value is an estimated quantity.
R – Data for analyte is unusable.
U – The material was analyzed for but was not detected above the level of the associated value.
UJ – The material was analyzed for but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

B:\MILES.WK3

CHEMICAL DATA SUMMARY

Site Name and Code: Miles Road Landfill,TXD980697072
Case Number: 20258
Concentrations in milligrams/kilogram (mg/kg)
Compiled by: Fluor Daniel,Inc.

Traffic Number:	MFAP54			MFAP55			MFAP56			MFAP57			MFAP58			MFAP48D						
Matrix:	SOIL			SOIL			SOIL			SOIL			SOIL			SOIL						
Percent Solids	79.1			75.7			83.0			77.5			74.4			74.6						
Location:	SS-08			SD-09			SD-10			SD-11			SD-12			DUPLICATE						
and or Sample Description:																LAB DUPLICATE						
COMPOUND NAME	**CAS NO.**	**CLASS**	**Concentration**	**C**		**Concentration**	**C**		**Concentration**	**C**		**Concentration**	**C**		**Concentration**	**C**		**Concentration**	**C**		**Concentration**	**C**	
ALUMINUM	7429-90-5	INO	14,300.00			11,700.00			12,200.00			5,670.00			9,320.00			18,653.75					
ANTIMONY	7440-36-0	INO																					
ARSENIC	7440-38-2	INO	4.70			4.20			8.30			8.00			5.60			5.15					
BARIUM	7440-39-3	INO	189.00			98.00			217.00			48.60			87.40			131.69					
BERYLLIUM	7440-41-7	INO																					
CADMIUM	7440-43-9	INO	4.00	U		4.00	U		4.00	U		4.00	U		4.00	U		4.00	U				
CALCIUM	7440-70-2	INO	90,500.00			81,600.00			101,000.00			227,000.00			199,000.00			79,124.41					
CHROMIUM	7440-47-3	INO	14.10	J		14.00	J		12.80	J		7.70	J		10.70	J		44.24	J				
COBALT	7440-48-4	INO	8.50			7.10			11.30			10.10			6.50			7.52					
COPPER	7440-50-8	INO	13.80	J		16.30	J		12.50	J		10.40	J		9.90	J		44.89	J				
IRON	7439-89-6	INO	15,700.00			20,500.00			15,100.00			13,000.00			10,800.00			19,243.91					
LEAD	7439-92-1	INO	22.00			17.80			30.60			10.80			14.80			29.24					
MAGNESIUM	7439-95-4	INO	2,890.00			5,730.00			3,400.00			1,920.00			2,530.00			5,535.54					
MANGANESE	7439-96-5	INO	306.00			286.00			581.00			860.00			753.00			292.48					
MERCURY	7439-97-6	INO	0.20	U		0.20	U		0.20	U		0.20	U		0.20	U		0.20	U				
NICKEL	7440-02-0	INO	18.10			19.60			20.20			18.70			18.70			19.91					
POTASSIUM	7440-09-7	INO	1,950.00			2,030.00			1,450.00			876.00			1,510.00			2,508.97					
SELENIUM	7782-49-2	INO																					
SILVER	7440-22-4	INO	5.00	U		5.00	U		5.00	U		5.00	U		5.00	U		5.00	U				
SODIUM	7440-23-5	INO	76.00			160.00			152.00			335.00			270.00			418.09					
THALLIUM	7440-28-0	INO																					
VANADIUM	7440-62-2	INO	34.10	B		30.80	B		36.90	B		22.90	B		30.70	B		41.48	B				
ZINC	7440-66-6	INO	65.50	J		81.00	J		51.60	J		42.20	J		40.40	J		114.82	J				
CYANIDE		INO	10.00	U		10.00	U		10.00	U		10.00	U		10.00	U		10.00	U				

LEGEND
INO – Inorganic
B – Blank interference. Ana[illegible] conc. <5x blank conc.
J – The associated value is an estimated quantity.
R – Data for analyte is unusable.
U – The material was analyzed for but was not detected above the level of the associated value.
UJ – The material was analyzed for but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

B:\MILES.WK3

ORGANIC DATA QUALITY ASSURANCE REVIEW

Site Name: Miles Road Landfill
Site Code: TXD980697072
Case Number: 20258

Laboratory: Ross Analytical Services, Inc.; Strongsville, OH

Soil Samples: FA-A38, FA-A39, FA-A40, FA-A41, FA-A42, FA-A31, FA-A32, FA-A33, FA-A34, FA-A35, FA-A36, FA-A37

The data package consists of 12 soil samples analyzed for volatile organics, semivolatile organics and pesticides/PCB's.

1. Analytical Parameters: Soil samples were analyzed using multi-media low concentration protocols.

2. Holding Times:

VOA: The VOA holding times were not exceeded.

BNA: The BNA holding times were not exceeded.

PEST/PCB: The Pesticide/PCB holding times were not exceeded.

4. Tuning/Performance:

VOA: Instrument performance checks met quality control criteria.

Internal standard meets quality control criteria.

BNA: Instrument performance checks met quality control criteria.

Internal standard meets quality control criteria.

PEST/PCB: Instrument perofrmance checks met quality control criteria.

4. Calibration Verification:

VOA: Initial calibration did not meet quality control criteria for acetone.

Continuing calibration checks did not meet quality control criteria for biomomethane and vinyl chloride. None of the above affected data results.

BNA: The initial calibration was not conducted within the alloted time frame of 12 hours before actual samples were run. On the first continuing calibration check, the %D for 2,4-Dinitrophenol and 4-Nitroaniline were beyond quality control criteria. On the second continuing calibration check, seven analyses failed to met quality control criteria. Sample data was not affected by these results.

PEST\PCB: The analytical sequence of running one standard every five smaples was not met.

5. Blanks:

VOA: All blanks met quality control criteria.

BNA: All blanks meet quality control criteria.

PEST/PCB: All blanks meet quality control criteria.

6. System Monitoring Compounds (SMCs)/Surrogates

VOA: Met quality control criteria.

BNA: Surrogate recovery meets quality control criteria.

PEST/PCB: Surrogate recovery met quality control criteria.

7. Matrix Spike/Matrix Spike Duplicates:

VOA: Met quality control criteria.

BNA: Pentachlocophenol did not meet the quality control criteria for matrix spike recovery and % RPD. 2,4 dinitrotoluene did not meet the quality control criteria for matrix spike recovery. This did not affect sample results.

PEST/PCB: Met quality control criteria.

8. Duplicates: FA-A32 and FA-A35 are identified as field duplicates. No gross variations in duplicate results are observed. No qualifications were performed due to duplicate criteria.

9. Target Compound Identity\Quantitation:

VOA: Quality control criteria were met.

A TIC was discovered in samples FA-A31 and FA-A33. It was n-Methyl 1-Octanamine.

BNA: Quality control criteria were met. Two TIC(s) were discovered. One each in samples FA-A38 and FA-A42. These were pentacosome and octacosame.

PEST/PCB: Quality control criteria were met.

10. Case Assessment:

VOA: There were no notable problems with VOA data. It is acceptable.

BNA: There were no notable problems with BNA data. It is acceptable.

PEST/PCB: Standards were not run every five samples. There were no other notable problems. Results are acceptable.

CHEMICAL DATA SUMMARY

Site Name and Code: Miles Road Landfill TXD980697072
Case Number: 20258
Concentrations in micrograms/kilogram (ug/kg)
Compiled by: Fluor Daniel, Inc.

Traffic Number:	FA-A31		FA-A32		FA-A33		FA-A34		FA-A35		FA-A36		FA-A37		
Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		
Percent Moisture:	19		22		21		19		22		22		26		
Location and/or Sample Description:	SS-01		SS-05		SS-07		SS-02		SS-04 FIELD DUPLICATE OF FA-A32		SS-06		SS-03		
COMPOUND NAME	**CAS NO.**	**CLASS**	**Concentration**	**Q**	**Concentration**	**Q**	**Concentration**	**Q**	**Concentration**	**Q**	**Concentration**	**Q**	**Concentration**	**Q**	**Concentration**	**Q**
Chloromethane	74-87-3	VOA														
Bromomethane	74-83-9	VOA														
Vinyl Chloride	75-01-4	VOA														
Chloroethane	75-00-3	VOA														
Methylene Chloride	75-09-2	VOA														
Acetone	67-64-1	VOA														
Carbon Disulfide	75-15-0	VOA														
1,1-Dichloroethene	75-35-4	VOA														
1,1-Dichloroethane	75-34-3	VOA														
1,2-Dichloroethene (total)	540-59-0	VOA														
Chloroform	67-66-3	VOA														
1,2-Dichloroethane	107-06-2	VOA														
2-Butanone	78-93-3	VOA														
1,1,1-Trichloroethane	71-55-6	VOA														
Carbon tetrachloride	56-23-5	VOA														
Bromodichloromethane	75-27-4	VOA														
1,2-Dichloropropane	78-87-5	VOA														
cis-1,3-Dichloropropene	10061-01-5	VOA														
Trichloroethene	79-01-6	VOA														
Dibromochloromethane	124-48-1	VOA														
1,1,2-Trichloroethane	79-00-5	VOA														
Benzene	71-43-2	VOA														
Trans-1,3-Dichloropropene	10061-02-6	VOA														
Bromoform	75-25-2	VOA														
4-Methyl-2-Pentanone	108-10-1	VOA														
2-Hexanone	591-78-6	VOA														
Tetrachloroethene	127-18-4	VOA														
1,1,2,2-Tetrachloroethane	79-34-5	VOA														
Toluene	108-88-3	VOA														
Chlorobenzene	108-90-7	VOA														
Ethylbenzene	100-41-4	VOA														
Styrene	100-42-5	VOA														
Xylene (total)	1330-20-7	VOA														

LEGEND
U – The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.
B – Analyte was detected in the blank.
J – The associated numerical value is an estimated quantity.
R – Data for analyte is unusable (compound may or may not be present).
N – Presumptive evidence of presence of the material.
NJ – Presumptive evidence of the presence of the material at an estimated quantity.
UJ – The material was analyzed for, but was not detected. The sample quantitation limit is an estimated quantity.

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CHEMICAL DATA SUMMARY

Site Name and Code: Mines Road Landfill TXD 980697072
Case Number: 20258
Concentrations in micrograms/kilogram (ug/kg)
Compiled by: Fluor Daniel, Inc.

Traffic Number:	FA-A38		FA-A39		FA-A40		FA-A41		FA-A42			
Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL			
Percent Moisture:	18		22		14		21		25			
Location and/or Sample Description:	SS-08		SD-09		SD-10		SD-11		SD-12			

COMPOUND NAME	CAS NO.	CLASS	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q
Chloromethane	74-87-3	VOA														
Bromomethane	74-83-9	VOA														
Vinyl Chloride	75-01-4	VOA														
Chloroethane	75-00-3	VOA														
Methylene Chloride	75-09-2	VOA														
Acetone	67-64-1	VOA														
Carbon Disulfide	75-15-0	VOA														
1,1-Dichloroethene	75-35-4	VOA														
1,1-Dichloroethane	75-34-3	VOA														
1,2-Dichloroethene (total)	540-59-0	VOA														
Chloroform	67-66-3	VOA														
1,2-Dichloroethane	107-06-2	VOA														
2-Butanone	78-93-3	VOA														
1,1,1-Trichloroethane	71-55-6	VOA														
Carbon tetrachloride	56-23-5	VOA														
Bromodichloromethane	75-27-4	VOA														
1,2-Dichloropropane	78-87-5	VOA														
cis-1,3-Dichloropropene	10061-01-5	VOA														
Trichloroethene	79-01-6	VOA														
Dibromochloromethane	124-48-1	VOA														
1,1,2-Trichloroethane	79-00-5	VOA														
Benzene	71-43-2	VOA														
Trans-1,3-Dichloropropene	10061-02-6	VOA														
Bromoform	75-25-2	VOA														
4-Methyl-2-Pentanone	108-10-1	VOA														
2-Hexanone	591-78-6	VOA														
Tetrachloroethene	127-18-4	VOA														
1,1,2,2-Tetrachloroethane	79-34-5	VOA														
Toluene	108-88-3	VOA														
Chlorobenzene	108-90-7	VOA														
Ethylbenzene	100-41-4	VOA														
Styrene	100-42-5	VOA														
Xylene (total)	1330-20-7	VOA														

LEGEND
U – The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.
B – Analyte was detected in the blank.
J – The associated numerical value is an estimated quantity.
R – Data for analyte is unusable (compound may or may not be present).
N – Presumptive evidence of presence of the material.
NJ – Presumptive evidence of the presence of the material at an estimated quantity.
UJ – The material was analyzed for, but was not detected. The sample quantitation limit is an estimated quantity.

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04/28/93

CHEMICAL DATA SUMMARY

Site Name and Code: Mike Road LF TXD980897072
Case Number: 20258
Concentrations in micrograms/kilogram (ug/kg)
Compiled by: Fluor Daniel, Inc.

Traffic Number:	FA-A31	FA-A32	FA-A33	FA-A34	FA-A35	FA-A36	FA-A37
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Percent Moisture:	19	22	21	19	22	22	28
Location and/or Sample Description:	SS-01	SS-05	SS-07	SS-02	SS-04 Field Duplicate of FA-A32	SS-06	SS-03

COMPOUND NAME	CAS NO.	CLASS	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C
Phenol	108-95-2	BNA														
bis(2-Chloroethyl)Ether	111-44-4	BNA														
2-Chlorophenol	95-57-8	BNA														
1,3-Dichlorobenzene	541-73-1	BNA														
1,4-Dichlorobenzene	106-46-7	BNA														
1,2-Dichlorobenzene	95-50-1	BNA														
2-Methylphenol	95-48-7	BNA														
2,2'-Oxybis(1-Chloropropane)	108-60-1	BNA														
4-Methylphenol	106-44-5	BNA														
N-Nitroso-Di-n-Propylamine	621-64-7	BNA														
Hexachloroethane	67-72-1	BNA														
Nitrobenzene	98-95-3	BNA														
Isophorone	78-59-1	BNA														
2-Nitrophenol	88-75-5	BNA														
2,4-Dimethylphenol	105-67-9	BNA														
bis(2-Chloroethoxy)Methane	111-91-1	BNA														
2,4-Dichlorophenol	120-83-2	BNA														
1,2,4-Trichlorobenzene	120-82-1	BNA														
Naphthalene	91-20-3	BNA														
4-Chloroaniline	106-47-8	BNA														
Hexachlorobutadiene	87-68-3	BNA														
4-Chloro-3-Methylphenol	59-50-7	BNA														
2-Methylnaphthalene	91-57-6	BNA														
Hexachlorocyclopentadiene	77-47-4	BNA														
2,4,6-Trichlorophenol	88-06-2	BNA														
2,4,5-Trichlorophenol	95-95-4	BNA														
2-Chloronaphthalene	91-58-7	BNA														
2-Nitroaniline	88-74-4	BNA														
Dimethyl Phthalate	131-11-3	BNA														
Acenaphthylene	208-96-8	BNA														
2,6-Dinitrotoluene	606-20-2	BNA														
3-Nitroaniline	99-09-2	BNA														
Acenaphthalene	83-32-9	BNA														

LEGEND
U – The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.
B – Analyte was detected in the blank.
J – The associated numerical value is an estimated quantity.
R – Data for analyte is unusable (compound may or may not be present).
N – Presumptive evidence of presence of the material.
NJ – Presumptive evidence of the presence of the material at an estimated quantity.
UJ – The material was analyzed for, but was not detected. The sample quantitation limit is an estimated quantity.

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04/28/93

CHEMICAL DATA SUMMARY

Site Name and Code: Miles Road LF TXD980697072
Case Number: 20256
Concentrations in micrograms/kilogram (ug/kg)
Compiled by: Fluor Daniel, Inc.

Traffic Number:	FA-A31		FA-A32		FA-A33		FA-A34		FA-A35		FA-A3c		FA-A37	
Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
Percent Moisture:	19		22		21		19		22		22		28	
Location and/or Sample Description:	SS-01		SS-05		SS-07		SS-02		SS-04 Field Duplicate of FA-A32		SS-06		SS-03	
COMPOUND NAME	**CAS NO.**	**CLASS**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**
2,4-Dinitrophenol	51-28-5	BNA														
4-Nitrophenol	100-02-7	BNA														
Dibenzofuran	132-64-9	BNA														
2,4-Dinitrotoluene	121-14-2	BNA														
Diethylphthalate	84-66-2	BNA														
4-Chlorophenyl-phenylether	7005-72-3	BNA														
Fluorene	86-73-7	BNA														
4-Nitroaniline	100-01-6	BNA														
4,6-Dinitro-2-Methylphenol	534-52-1	BNA														
N-Nitrosodiphenylamine(1)	86-30-6	BNA														
4-Bromophenyl-phenylether	101-55-3	BNA														
Hexachlorobenzene	118-74-1	BNA														
Pentachlorophenol	87-86-5	BNA														
Phenanthrene	85-01-8	BNA														
Anthracene	120-12-7	BNA														
Carbazole	86-74-8	BNA														
Di-n-Butylphthalate	84-74-2	BNA														
Fluoranthene	206-44-0	BNA														
Pyrene	129-00-0	BNA														
Butylbenzylphthalate	85-68-7	BNA														
3,3'-Dichlorobenzidine	91-94-1	BNA														
Benzo(a)Anthracene	56-55-3	BNA														
Chrysene	218-01-9	BNA														
bis(2-Ethylhexyl)Phthalate	117-81-7	BNA														
Di-n-Octyl Phthalate	117-84-0	BNA														
Benzo(b)Fluoranthene	205-99-2	BNA														
Benzo(k)Fluoranthene	207-08-9	BNA														
Benzo(a)Pyrene	50-32-8	BNA														
Indeno(1,2,3-cd)Pyrene	193-39-5	BNA														
Dibenz(a,h)Anthracene	53-70-3	BNA														
Benzo(g,h,i)Perylene	191-24-2	BNA														

LEGEND
U – The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.
B – Analyte was detected in the blank.
J – The associated numerical value is an estimated quantity.
R – Data for analyte is unusable (compound may or may not be present).
N – Presumptive evidence of presence of the material.
NJ – Presumptive evidence of the presence of the material at an estimated quantity.
UJ – The material was analyzed for, but was not detected. The sample quantitation limit is an estimated quantity.

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04/28/93

CHEMICAL DATA SUMMARY

Site Name and Code: Mlles Road LF TXD980857072
Case Number: 20258
Concentrations in micrograms/kilogram (ug/kg)
Compiled by: Fluor Daniel, Inc.

Traffic Number:	FA-A38				FA-A39				FA-A40				FA-A41				FA-A42							
Matrix:	SOIL				SOIL				SOIL				SOIL				SOIL							
Percent Moisture:	18				22				14				21				25							
Location and/or Sample Description:	SS-08				SD-09				SD-10				SD-11				SD-12							
COMPOUND NAME	**CAS NO.**	**CLASS**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**
Phenol	108-95-2	BNA																				
bis(2-Chloroethyl)Ether	111-44-4	BNA																				
2-Chlorophenol	95-57-8	BNA																				
1,3-Dichlorobenzene	541-73-1	BNA																				
1,4-Dichlorobenzene	106-46-7	BNA																				
1,2-Dichlorobenzene	95-50-1	BNA																				
2-Methylphenol	95-48-7	BNA																				
2,2'-Oxybis(1-Chloropropane)	108-60-1	BNA																				
4-Methylphenol	106-44-5	BNA																				
N-Nitroso-Di-n-Propylamine	621-64-7	BNA																				
Hexachloroethane	67-72-1	BNA																				
Nitrobenzene	98-95-3	BNA																				
Isophorone	78-59-1	BNA																				
2-Nitrophenol	88-75-5	BNA																				
2,4-Dimethylphenol	105-67-9	BNA																				
bis(2-Chloroethoxy)Methane	111-91-1	BNA																				
2,4-Dichlorophenol	120-83-2	BNA																				
1,2,4-Trichlorobenzene	120-82-1	BNA																				
Naphthalene	91-20-3	BNA																				
4-Chloroaniline	106-47-8	BNA																				
Hexachlorobutadiene	87-68-3	BNA																				
4-Chloro-3-Methylphenol	59-50-7	BNA																				
2-Methylnaphthalene	91-57-6	BNA																				
Hexachlorocyclopentadiene	77-47-4	BNA																				
2,4,6-Trichlorophenol	88-06-2	BNA																				
2,4,5-Trichlorophenol	95-95-4	BNA																				
2-Chloronaphthalene	91-58-7	BNA																				
2-Nitroaniline	88-74-4	BNA																				
Dimethyl Phthalate	131-11-3	BNA																				
Acenaphthylene	208-96-8	BNA																				
2,6-Dinitrotoluene	606-20-2	BNA																				
3-Nitroaniline	99-09-2	BNA																				
Acenaphthelene	83-32-9	BNA																				

LEGEND
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B:\SOSTH2.ABN

04/28/93

CHEMICAL DATA SUMMARY

Site Name and Code: Miles Road LF TXD980697072
Case Number: 20258
Concentrations in micrograms/kilogram (ug/kg)
Compiled by: Fluor Daniel, Inc.

Traffic Number:	FA-A38				FA-A39				FA-A40				FA-A41				FA-A42				
Matrix:	SOIL				SOIL				SOIL				SOIL				SOIL				
Percent Moisture:	18				22				14				21				25				
Location and/or Sample Description:	SS-08				SD-09				SD-10				SD-11				SD-12				
COMPOUND NAME	**CAS NO.**	**CLASS**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**
2,4-Dinitrophenol	51-28-5	BNA																		
4-Nitrophenol	100-02-7	BNA																		
Dibenzofuran	132-64-9	BNA																		
2,4-Dinitrotoluene	121-14-2	BNA																		
Diethylphthalate	84-66-2	BNA																		
4-Chlorophenyl-phenylether	7005-72-3	BNA																		
Fluorene	86-73-7	BNA																		
4-Nitroaniline	100-01-6	BNA																		
4,6-Dinitro-2-Methylphenol	534-52-1	BNA																		
N-Nitrosodiphenylamine(1)	86-30-6	BNA																		
4-Bromophenyl-phenylether	101-55-3	BNA																		
Hexachlorobenzene	118-74-1	BNA																		
Pentachlorophenol	87-86-5	BNA																		
Phenanthrene	85-01-8	BNA																		
Anthracene	120-12-7	BNA																		
Carbazole	86-74-8	BNA																		
Di-n-Butylphthalate	84-74-2	BNA																		
Fluoranthene	206-44-0	BNA																		
Pyrene	129-00-0	BNA																		
Butylbenzylphthalate	85-68-7	BNA																		
3,3'-Dichlorobenzidine	91-94-1	BNA																		
Benzo(a)Anthracene	56-55-3	BNA																		
Chrysene	218-01-9	BNA																		
bis(2-Ethylhexyl)Phthalate	117-81-7	BNA																		
Di-n-Octyl Phthalate	117-84-0	BNA																		
Benzo(b)Fluoranthene	205-99-2	BNA																		
Benzo(k)Fluoranthene	207-08-9	BNA																		
Benzo(a)Pyrene	50-32-8	BNA																		
Indeno(1,2,3-cd)Pyrene	193-39-5	BNA																		
Dibenz(a,h)Anthracene	53-70-3	BNA																		
Benzo(g,h,i)Perylene	191-24-2	BNA																		

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B:\SOSTH2.ABN

CHEMICAL DATA SUMMARY

Site Name and Code: MILES ROAD LANDFILL ,TXD980697072
Case Number: 20258
Concentrations in micrograms/kilogram (ug/kg)
Compiled by: Fluor Daniel, Inc.

Traffic Number:	FA-A31	FA-A32	FA-A33	FA-A34	FA-A35	FA-A36	FA-A37
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Percent Moisture:	19	22	21	19	22	22	28
Location and/or Sample Description:	SS-01	SS-05	SS-07	SS-02	SS-04 FIELD DUPLICATE of FA-A22	SS-06	SS-03

COMPOUND NAME	CAS NO.	CLASS	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q
alpha-BHC	319-84-6	PEST/PCB														
beta-BHC	319-85-7	PEST/PCB														
delta-BHC	319-86-8	PEST/PCB														
gamma-BHC(Lindane)	58-89-9	PEST/PCB														
Heptachlor	76-44-8	PEST/PCB														
Aldrin	309-00-2	PEST/PCB														
Heptachlor epoxide	1024-57-3	PEST/PCB	2.1	U	2.2	U	2.2	U	2.1	U	2.2	U	2.2	U	7.6	
Endosulfan I	959-98-8	PEST/PCB														
Dieldrin	60-57-1	PEST/PCB	4.1	U	4.3	U	4.2	U	4.1	U	4.2	U	4.2	U	44	
4,4'-DDE	72-55-9	PEST/PCB	4.1	U	4.3	U	4.2	U	4.1	U	4.2	U	4.2	U	8.2	
Endrin	72-20-8	PEST/PCB														
Endosulfan II	33213-65-9	PEST/PCB														
4,4'-DDD	72-54-8	PEST/PCB	4.1	U	4.3	U	4.2	U	4.1	U	5.1		4.2	U	34	
Endosulfan sulfate	1031-07-8	PEST/PCB														
4,4'-DDT	50-29-3	PEST/PCB														
Methoxychlor	72-43-5	PEST/PCB														
Endrin ketone	53494-70-5	PEST/PCB														
Endrin aldehyde	7421-93-4	PEST/PCB														
alpha-Chlordane	5103-71-9	PEST/PCB	2.1	U	4.6		2.2	U	2.1	U	7.9		2.2	U	140	
gamma-Chlordane	5103-74-2	PEST/PCB	2.1	U	4.5		2.2	U	2.1	U	7.6		2.2	U	210	
Toxaphene	8001-35-2	PEST/PCB														
Aroclor-1016	12674-11-2	PEST/PCB														
Aroclor-1221	11104-28-2	PEST/PCB														
Aroclor-1232	11141-16-5	PEST/PCB														
Aroclor-1242	53469-21-9	PEST/PCB														
Aroclor-1248	12672-29-6	PEST/PCB														
Aroclor-1254	11097-69-1	PEST/PCB														
Aroclor-1260	11096-82-5	PEST/PCB														

LEGEND
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J - The associated numerical value is an estimated quantity.
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N - Presumptive evidence of presence of the material.
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B:\pestbik

CHEMICAL DATA SUMMARY

Site Name and Code: MILES ROAD LANDFILL, TXD
Case Number: 20258
Concentrations in micrograms/kilogram (µg/kg)
Compiled by: Fluor Daniel, Inc.

Traffic Number:	FA-A38		FA-A39		FA-A40		FA-A41		FA-A42				
Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL				
Percent Moisture:	18		22		14		21		25				
Location and/or Sample Description:	SS-08		SD-09		SD-10		SD-11		SD-12				
COMPOUND NAME	**CAS NO.**	**CLASS**	**Concentration**	**Q**	**Concentration**	**Q**	**Concentration**	**Q**	**Concentration**	**Q**	**Concentration**	**Q**	**Concentration**	**Q**	**Concentration**	**Q**
alpha-BHC	319-84-6	PEST/PCB														
beta-BHC	319-85-7	PEST/PCB														
delta-BHC	319-86-8	PEST/PCB														
gamma-BHC(Lindane)	58-89-9	PEST/PCB														
Heptachlor	76-44-8	PEST/PCB														
Aldrin	309-00-2	PEST/PCB														
Heptachlor epoxide	1024-57-3	PEST/PCB	2.1	U	2.2	U	2	U	2.2	U	2.3	U				
Endosulfan I	959-98-8	PEST/PCB														
Dieldrin	60-57-1	PEST/PCB	4	U	4.2	U	3.8	U	4.2	U	4.4	U				
4,4'-DDE	72-55-9	PEST/PCB	4	U	4.2	U	3.8	U	4.2	U	4.4	U				
Endrin	72-20-8	PEST/PCB														
Endosulfan II	33213-65-9	PEST/PCB														
4,4'-DDD	72-54-8	PEST/PCB	4	U	4.2	U	3.8	U	4.2	U	4.4	U				
Endosulfan sulfate	1031-07-8	PEST/PCB														
4,4'-DDT	50-29-3	PEST/PCB														
Methoxychlor	72-43-5	PEST/PCB														
Endrin ketone	53494-70-5	PEST/PCB														
Endrin aldehyde	7421-93-4	PEST/PCB														
alpha-Chlordane	5103-71-9	PEST/PCB	2.1	U	2.2	U	2	U	2.2	U	2.3	U				
gamma-Chlordane	5103-74-2	PEST/PCB	2.1	U	2.2	U	2	U	2.2	U	2.3	U				
Toxaphene	8001-35-2	PEST/PCB														
Aroclor-1016	12674-11-2	PEST/PCB														
Aroclor-1221	11104-28-2	PEST/PCB														
Aroclor-1232	11141-16-5	PEST/PCB														
Aroclor-1242	53469-21-9	PEST/PCB														
Aroclor-1248	12672-29-6	PEST/PCB														
Aroclor-1254	11097-69-1	PEST/PCB														
Aroclor-1260	11096-82-5	PEST/PCB														

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B:\pestblk

CHEMICAL DATA SUMMARY

Site Name and Code: Miles Road LF TXD 980697072
Case Number: 20258
Concentrations in micrograms/kilogram (ug/kg)
Compiled by: Fluor Daniel, Inc.

		Traffic Number:	FA-A31		FA-A32		FA-A33		FA-A34		FA-A35		FA-A36		FA-A37	
		Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
		Percent Moisture:	19		22		21		19		22		22		28	
		Location and/or Sample Description:	SS-01		SS-05		SS-07		SS-02		SS-04 Field Duplicate of FA-A32		SS-06		SS-03	
COMPOUND NAME	CAS NO.	CLASS	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C
		VOC														
N-Methyl-1-Octanamine	2439-54-5	TIC	340	JN			420	JN								
Carbon Dioxide	124-38-9	TIC			390	BJN			380	BJN	440	BJN	440	BJN	670	BJN
		BNA														
Unknown		TIC	180	J	110	J	270	J	300	J	280	J	120	J	1600	J
2-Pentanone, 4-hydroxy-4-Met	123-42-2	TIC	8700	BJN	11000	BJN	14000	BJN	13000	BJN	12000	BJN	14000	BJN	14000	BJN
Hydroperoxide, 1,1-Dimethyle	75-91-2	TIC					120	JN	120	JN	110	JN				
4-Penten-2-Ol	625-31-0	TIC	99	BJN	490	BJN	140	BJN	550	BJN	550	BJN	550	BJN		
2-Methyl-2,3-Pentanediol	7795-80-4	TIC					250	JN								
2-Butanol, 1-Methoxy	53778-73-7	TIC	200	BJN			130	J	250	BJN			270	BJN		
Unknown		TIC	640	J	250	J	490	J	230	J	280	J	540	J	260	J
Unknown		TIC	270	J	220	J	140	J	84	J	150	J			58	J
Unknown		TIC	190	J	580	J	400	J	160	J	220	J			300	J
Unknown		TIC	960	J	740	J	280	J	420	J	160	J			260	J
Octane, 2,4,6-Trimethyl	62016-37-9	TIC	170	JN			410	J			520	J				
Unknown		TIC	960	J	68	J	730	J	400	J	170	J	80	J	110	J
Unknown		TIC			150	J	1400	J	340	J	450	J	620	J	45	J
Unknown		TIC			360	J			940	J	110	J	320	J	170	J
Unknown		TIC									22	J	410	J	200	J
Unknown		TIC									92	J	1300	J	1700	J
Unknown		TIC									340	J			230	J
Unknown		TIC									200	J			1000	J
Unknown		TIC									340	J			970	J
Unknown		TIC									370	J				
Unknown		TIC									340	J				
Octacosane	630-2-4	TIC											250	JN		

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B:\VOABLK

CHEMICAL DATA SUMMARY

Site Name and Code: Mike Road LF TXD 980697072
Case Number: 20258
Concentrations in microgram/kilogram (ug/kg)
Compiled by: Fluor Daniel, Inc.

	Traffic Number:	FA-A38		FA-A39		FA-A40		FA-A41		FA-A42									
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL									
	Percent Moisture:	18		22		14		21		25									
	Location and/or Sample Description:	SS-08		SD-09		SD-10		SD-11		SD-12									
COMPOUND NAME	CAS NO.	CLASS	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C	
		VOC																	
Carbon Dioxide	124-38-9	TIC	280	BJN	200	BJN	380	JN	110	JN	250	JN							
3-Heptanone	106-35-4	TIC							9	JN									
		BNA																	
Unknown		TIC	120	J	80	J	97	J	110	J	78	J							
2-Pentanone, 4-hydroxy-4-Met	123-42-2	TIC	13000	BJN	11000	BJN	10000	BJN	14000	BJN	13000	BJN							
4-Penten-2-Ol	625-31-0	TIC	510	BJN	400	BJN	380	BJN	540	BJN	450	BJN							
2-Butanol, 1-Methoxy	53778-73-7	TIC	270	BJN							230	BJN							
Unknown		TIC	270	J	200	J	190	J	290	J	220	J							
Unknown		TIC	530	J	160	J	180	J	120	J	670	J							
Unknown		TIC	250	J			230	J	230	J	380	J							
Unknown		TIC	470	J			250	J	250	J	110	J							
Unknown		TIC	970	J			51	J			190	J							
Unknown		TIC	2700	J			79	J											
Unknown		TIC					160	J											
Unknown		TIC					270	J			260	J							
Unknown		TIC					3500	J			550	J							
Unknown		TIC									1100	J							
Octacosane	630-2-4	TIC	1300	JN															
Hexanedioic Acid, Mono(2-eth	4337-65-9	TIC			940	JN	450	JN	400	JN									
2-Propenoic Acid, 2-Methyl-,	4245-37-8	TIC					240	JN											
Glycine, N-Methyl-N-(1,Oxodo	97-78-9	TIC					140	JN			350	JN							
3-Hydroxy-2-Pentanone	142-66-33	TIC							220	JN									
Ethanol,2,2'-Oxybis-,Diace	628-68-2	TIC									470	JN							
Tetradecane	629-59-4	TIC					400	JN											
Hexanedioic acid, Dioctyl es	123-79-5	TIC									290	JN							
Pentadecane	629-62-9	TIC									1100	JN							

LEGEND
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B:\VOABLK

ATTACHMENT 5
DRINKING WATER SAMPLE DATA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE RD.
HOUSTON, TEXAS 77099

MEMORANDUM

DATE: August 12, 1993

SUBJECT: Notice of Intent to Dispose of Samples

FROM: Diana G. Ayers, Chief, Houston Branch; 6E-H

TO: Ragan Broyles, Chief,
Surveillance Branch; 6E-S

The Houston Laboratory is required to dispose of all hazardous wastes we generate in a manner consistent with RCRA regulations. This includes all samples received for analysis provided we find them to contain contaminants which classify them as RCRA hazardous wastes. In addition, any samples found to contain PCBs must be disposed of according to TCSA regulations.

I have included this memorandum in the final analytical report to serve as notice to the program that we have completed all analysis. If we have any of the original sample remaining after analysis is complete we will dispose of it within 90 days. Please note that even though original sample may be left over, it does not mean that a reanalysis of the sample may be requested since the sample has most likely exceeded its holding time and any subsequent analysis may not be valid.

If you have a need to hold these samples in custody longer than 90 days, please sign below and return this memorandum to me within the next 30 days. Also, state briefly your need to hold these samples in custody.

Thank you for your cooperation in this request.

MILES ROAD LANDFILL (3TFADW40)

Facility Name

Program Manager Date

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE RD.
HOUSTON, TEXAS 77099

MEMORANDUM

DATE: August 12, 1993

SUBJECT: Laboratory Results for Miles Road Landfill

FROM: Diana G. Ayers, Chief, Houston Branch; 6E-H

TO: Ragan Broyles, Chief, Surveillance Branch; 6E-S

ATTN: Stacey Bennett; 6E-SH

Attached are the analytical results for the subject site. Four water samples were received on July 13, 1993 to be analyzed for ABNs, VOAs, pesticides, PCBs, metals and cyanide. The laboratory numbers assigned to these samples are 3TFADW4001 through 3TFADW4004.

Please note that 44 ppb of bis-(2-ethylhexyl) phthalate was detected in sample number 3TFADW4002.

This is a final report.

Attachments

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE RD.
HOUSTON, TEXAS 77099

MEMORANDUM

Date: August 12, 1993

From: Michael Daggett, Chief
Organic Section; 6E-HO

To: Diana Ayers, Chief
Houston Branch; 6E-H

Subject: Organic Analysis of Miles Road Landfill.

Attached are the organic results for samples 3TFADW40-01 thru 3TFADW40-04. These samples were analyzed for ABNs, VOAs pesticides and PCBs. There was 44 ug/l (ppb) of bis-(2-ethylhexyl) phthalate detected in sample # 02.

This is a final report.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE RD.
HOUSTON, TEXAS 77099

MEMORANDUM:

Date: August 12, 1993

Subject: Laboratory Results for Miles Road Landfill

From: David C. Stockton, Chief, Inorganic Lab Section, (6E-HI)

To: Diana G. Ayers, Chief, Houston Branch, (6E-H)

Attached are laboratory results for the subject site. Four (4) water samples we received on July 13, 1993 to be analyzed for metals and cyanide.

The laboratory numbers assigned were 3TFADW4001 through 3TFADW4004.

This is a final report.

Attachments: (4)

August 12, 1993

U.S. Environmental Protection Agency

Houston Branch Management System

Report for Sample Number 3TFADW4001

Source: MILES ROAD LANDFILL

Site Description: STA #1 (b) (6) WELL

Date/Time Received: 7/13/93 10:00 | Date/Time Collected: 7/12/93 10:55

Sample Type: DW | Date Completed: 8/12/93

Comments:

Parameter	Description	Section	Status	Report Date
ABN	ACID/BASE NEUTRALS	ORGANIC	COMPLETE	8/12/93
CN	CYANIDE	INORGANIC	COMPLETE	8/12/93
HSL	HAZARDOUS SUBSTANCE LIST	METALS	COMPLETE	8/12/93
PCB	POLYCHLORINATED BIPHENYLS	ORGANIC	COMPLETE	8/12/93
PES	PESTICIDES	ORGANIC	COMPLETE	8/12/93
VOA	VOLATILE ORGANIC ANALYSIS	ORGANIC	COMPLETE	8/12/93

Attachment: 1

ORGANIC ANALYSIS DATA

6E-HL Sample NO: 3TFAQW40-01

Date Reported: 06-Aug-93

Analyst: M. HUMPHREY

Sample Type: WATER

SEMI-VOLATILE COMPOUNDS BY METHOD 625

Compound Name	Results*	Det Limits	Compound Name	Results*	Det Limits
	units: ug/L			units: ug/L	
Acenaphthene	ND	2	2,4-Dinitrophenol	ND	30
Acenaphthylene	ND	2	2,4-Dinitrotoluene	ND	6
Anthracene	ND	2	2,6-Dinitrotoluene	ND	6
Benzidine	ND	20	4,6-Dinitro-2-Methylphenol	ND	20
Benzoic Acid	ND	10	Di-n-Butylphthalate	ND	2
Benzo(a)Anthracene	ND	8	Di-n-Octyl Phthalate	ND	4
Benzo(a)Pyrene	ND	8	Fluoranthene	ND	2
Benzo(b)Fluoranthene	ND	8	Fluorene	ND	2
Benzo(g,h,i)Perylene	ND	8	Hexachlorobenzene	ND	2
Benzo(k)Fluoranthene	ND	8	Hexachlorobutadiene	ND	5
Benzyl Alcohol	ND	4	Hexachlorocyclopentadiene	ND	10
bis(2-Chloroethoxy)Methane	ND	2	Hexachloroethane	ND	3
bis(2-Chloroethyl) Ether	ND	2	Indeno(1,2,3-cd) Pyrene	ND	8
bis(2-chloroisopropyl)Ether	ND	2	Isophorone	ND	4
bis-(2-Ethylhexyl)Phthalate	ND	4	2-Methylnaphthalene	ND	2
4-Bromophenylphenyl Ether	ND	8	2-Methylphenol	ND	6
Butylbenzylphthalate	ND	4	4-Methylphenol	ND	6
Carbazole	ND	10	Naphthalene	ND	2
4-Chloroaniline	ND	4	2-Nitroaniline	ND	8
2-Chloronaphthalene	ND	2	3-Nitroaniline	ND	8
2-Chlorophenol	ND	4	4-Nitroaniline	ND	8
4-Chlorophenylphenyl Ether	ND	8	Nitrobenzene	ND	2
4-Chloro-3-Methylphenol	ND	8	2-Nitrophenol	ND	10
Chrysene	ND	8	4-Nitrophenol	ND	13
Dibenzofuran	ND	2	N-Nitrosodiphenylamine	ND	4
Dibenzo(a,h)Anthracene	ND	8	N-Nitroso-Di-n-Propylamine	ND	6
1,2-Dichlorobenzene	ND	3	Pentachlorophenol	ND	15
1,3-Dichlorobenzene	ND	3	Phenanthrene	ND	2
1,4-Dichlorobenzene	ND	3	Phenol	ND	4
3,3'-Dichlorobenzidine	ND	10	Pyrene	ND	2
2,4-Dichlorophenol	ND	6	1,2,4-Trichlorobenzene	ND	3
Diethylphthalate	ND	2	2,4,5-Trichlorophenol	ND	6
2,4-Dimethylphenol	ND	6	2,4,6-Trichlorophenol	ND	6
DimethylPhthalate	ND	2			

(*) ND = Not detected above the listed detection limit.

(*) ND = Not detected above the listed detection limit.

Analyst Notes: _____

Attachment: 1

ORGANIC ANALYSIS DATA

6E-HL Sample NO:3TFADU40-01

Date Reported: 06-Aug-93

Analyst: M. HUMPHREY

Matrix: WATER

TENTATIVELY IDENTIFIED SEMI-VOLATILE COMPOUNDS BY METHOD 625

units: ug/L

RT (min)	CAS #	COMPOUND NAME (*)	Estimated Concentration (**)
		No ABN TIC's detected in this sample.	

(*) ANALYSTS NOTE: The compounds listed are tentatively identified by the best match with the NIH/EPA/Wiley mass spectral data base or by manual interpretation. Standards were not available for confirmation or quantitation.

(**) Estimated concentration is based on a Response Factor of 1.0 to the nearest internal standard.

ORGANIC ANALYSIS DATA

6E-HL SAMPLE NO: 3TFADW40-01 DATE REPORTED: 10-Aug-93

ANALYST: F. Edward O'Neill SAMPLE TYPE: water

VOLATILE COMPOUNDS BY METHOD 624 units: ug/L

CAS#	Compound Name	Results*	Det Limits
67-64-1	acetone	ND	5
107-02-8	acrolein	ND	100
107-13-1	acrylonitrile	ND	100
71-43-2	benzene	ND	2
75-27-4	bromodichloromethane	ND	2
75-25-2	bromoform	ND	2
74-83-9	bromomethane	ND	5
78-93-3	2-butanone	ND	5
75-15-0	carbon disulfide	ND	5
56-23-5	carbon tetrachloride	ND	2
108-90-7	chlorobenzene	ND	2
75-00-3	chloroethane	ND	5
67-66-3	chloroform	ND	2
74-87-3	chloromethane	ND	5
124-48-1	dibromochloromethane	ND	2
75-34-3	1,1-dichloroethane	ND	2
107-06-2	1,2-dichloroethane	ND	2
75-35-4	1,1-dichloroethene	ND	2
156-59-2	cis-1,2-dichloroethene	ND	2
156-60-5	trans-1,2-dichloroethene	ND	2
78-87-5	1,2-dichloropropane	ND	2
10061-01-5	cis-1,3-dichloropropene	ND	2
10061-02-6	trans-1,3-dichloropropene	ND	2
100-41-4	ethylbenzene	ND	5
519-78-6	2-hexanone	ND	5
75-09-2	methylene chloride	ND	5
108-10-1	4-methyl-2-pentanone	ND	5
100-42-5	styrene	ND	5
79-34-5	1,1,2,2-tetrachloroethane	ND	2
127-18-4	tetrachloroethene	ND	2
108-88-3	toluene	ND	5
71-55-6	1,1,1-trichloroethane	ND	2
79-00-5	1,1,2-trichloroethane	ND	2
79-01-6	trichloroethene	ND	2
75-01-4	vinyl chloride	ND	5
108-38-3	m- and/or (CAS# 106-42-3)p-xylene	ND	5
95-47-6	o-xylene	ND	5

(*) ND = Not detected above the listed detection limit.

PAGE 4 OF 6 Attachment: 1

ORGANIC ANALYSIS DATA

6E-HL SAMPLE NO: 3TFADW40-01 DATE REPORTED: 10-Aug-93

ANALYST: F. Edward O'Neill SAMPLE TYPE: water

TENTATIVELY IDENTIFIED VOLATILE COMPOUNDS BY METHOD 624

(min) RT	CAS#	COMPOUND NAME *	ug/L EST. CONC.
		No VOA TIC's detected in this sample.	

* ANALYSTS NOTE - THE COMPOUNDS LISTED ARE TENTATIVELY IDENTIFIED BY THE BEST MATCH WITH THE NIH/EPA/WILEY MASS SPECTRAL DATA BASE OR BY MANUAL INTERPRETATION. STANDARDS WERE NOT AVAILABLE FOR CONFIRMATION OR QUANTITATION.

**Estimated concentration is based on a RF of 1.0 to internal standard

PESTICIDE/PCB ANALYSIS

[illegible]ES-ML SAMPLE NO.: 3TFADW40-01 DATE REPORTED: 8/[illegible]/1993

SAMPLE TYPE: WATER [illegible]LES ROAD LANDFILL

ANALYST: LARRY STRECK

CAS#		UG/L (PPB)
319-84-6	alpha-BHC	ND DL=< 0.05
[illegible]	beta-BHC	ND DL=< 0.05
319-86-8	delta-BHC	ND DL=< 0.05
58-89-9	gamma-BHC (Lindane)	ND DL=< 0.05
76-44-8	Heptachlor	ND DL=< 0.05
[illegible]	Aldrin	ND DL=< 0.05
[illegible]	Heptachlor epoxide	ND DL=< 0.05
959-98-8	Endosulfan I	ND DL=< 0.05
60-57-1	Dieldrin	ND DL=< 0.05
[illegible]	4,4'-DDE	ND DL=< [illegible]
[illegible]	Endrin	ND DL=< 0.10
33213-65-9	Endosulfan II	ND DL=< 0.10
72-54-8	4,4'-DDD	ND DL=< 0.10
7421-93-4	Endrin aldehyde	ND DL=< 0.10
53494-70-5	Endrin ketone	ND DL=< 0.10
1031-07-8	Endosulfan sulfate	ND DL=< 0.10
[illegible]	4,4'-DDT	ND DL=< 0.10
72-43-5	Methoxychlor	ND DL=< 0.10
5103-71-9	alpha-Chlordane	ND DL=< 0.50
5103-74-2	gamma-Chlordane	ND DL=< 0.05
8001-35-2	Toxaphene	ND DL=< 0.05
12674-11-2	Aroclor-1016	ND DL=< [illegible]
11104-28-2	Aroclor-1221	ND DL=< [illegible]
11141-16-5	Aroclor-1232	ND DL=< 2.00
53469-21-9	Aroclor-1242	ND DL=< 1.00
12672-29-6	Aroclor-1248	ND DL=< [illegible]
[illegible]	Aroclor-125[illegible]	ND DL=< [illegible]
11096-82-5	[illegible]	ND DL=< [illegible]

ND DL = NOT DETECTED, [illegible]

000734

US EPA HOUSTON BRANCH

SAMPLE #:	3TFADW40-01	DATE RECEIVED:	13-Jul-93
SOURCE:	MILES ROAD LANDFILL		
TYPE:	AQUEOUS	DATE REPORTED:	12-Aug-93
ANALYSTS:	RC, LC, JL		

PARAMETER	CONCENTRATION	DETECTION LIMIT <=	UNITS
ALUMINUM	ND	100	UG/L
ANTIMONY	ND	60	UG/L
ARSENIC	ND	5.8	UG/L
BARIUM	34	10	UG/L
BERYLLIUM	ND	5	UG/L
CADMIUM	ND	5	UG/L
CALCIUM	68100	150	UG/L
CHROMIUM	ND	10	UG/L
COBALT	ND	20	UG/L
COPPER	24	20	UG/L
IRON	43	25	UG/L
LEAD	ND	3.3	UG/L
MAGNESIUM	16300	150	UG/L
MANGANESE	21	5	UG/L
MERCURY	ND	0.2	UG/L
NICKEL	ND	20	UG/L
POTASSIUM	1390	1000	UG/L
SELENIUM	ND	5.8	UG/L
SILVER	ND	10	UG/L
SODIUM	152000	500	UG/L
THALLIUM	ND	10	UG/L
VANADIUM	ND	30	UG/L
ZINC	191	20	UG/L
CYANIDE	ND	0.02	MG/L

ND: LESS THAN DETECTION LIMIT

August 12, 1993

U.S. Environmental Protection Agency

Houston Branch Management System

Report for Sample Number 3TFADW4002

Source: MILES ROAD LANDFILL

Site Description: STA #14 (b) (6) WELL

Date/Time Received: 7/13/93 10:00

Date/Time Collected: 7/12/93 10:55

Sample Type: DW

Date Completed: 8/12/93

Comments:

Parameter	Description	Section	Status	Report Date
ABN	ACID/BASE NEUTRALS	ORGANIC	COMPLETE	8/12/93
CN	CYANIDE	INORGANIC	COMPLETE	8/12/93
HSL	HAZARDOUS SUBSTANCE LIST	METALS	COMPLETE	8/12/93
PCB	POLYCHLORINATED BIPHENYLS	ORGANIC	COMPLETE	8/12/93
PES	PESTICIDES	ORGANIC	COMPLETE	8/12/93
VOA	VOLATILE ORGANIC ANALYSIS	ORGANIC	COMPLETE	8/12/93

ORGANIC ANALYSIS DATA

6E-HL Sample NO: 3TFADW40-02 Date Reported: 06-Aug-93

Analyst: M. HUMPHREY Sample Type: WATER

SEMI-VOLATILE COMPOUNDS BY METHOD 625

Compound Name	Results*	Det Limits (units: ug/L)	Compound Name	Results*	Det Limits (units: ug/L)
Acenaphthene	ND	2	2,4-Dinitrophenol	ND	30
Acenaphthylene	ND	2	2,4-Dinitrotoluene	ND	6
Anthracene	ND	2	2,6-Dinitrotoluene	ND	6
Benzidine	ND	20	4,6-Dinitro-2-Methylphenol	ND	20
Benzoic Acid	ND	10	Di-n-Butylphthalate	ND	2
Benzo(a)Anthracene	ND	8	Di-n-Octyl Phthalate	ND	4
Benzo(a)Pyrene	ND	8	Fluoranthene	ND	2
Benzo(b)Fluoranthene	ND	8	Fluorene	ND	2
Benzo(g,h,i)Perylene	ND	8	Hexachlorobenzene	ND	2
Benzo(k)Fluoranthene	ND	8	Hexachlorobutadiene	ND	5
Benzyl Alcohol	ND	4	Hexachlorocyclopentadiene	ND	10
bis(2-Chloroethoxy)Methane	ND	2	Hexachloroethane	ND	3
bis(2-Chloroethyl) Ether	ND	2	Indeno(1,2,3-cd) Pyrene	ND	8
bis(2-chloroisopropyl)Ether	ND	2	Isophorone	ND	4
bis-(2-Ethylhexyl)Phthalate	44.0	4	2-Methylnaphthalene	ND	2
4-Bromophenylphenyl Ether	ND	8	2-Methylphenol	ND	6
Butylbenzylphthalate	ND	4	4-Methylphenol	ND	6
Carbazole	ND	10	Naphthalene	ND	2
4-Chloroaniline	ND	4	2-Nitroaniline	ND	8
2-Chloronaphthalene	ND	2	3-Nitroaniline	ND	8
2-Chlorophenol	ND	4	4-Nitroaniline	ND	8
4-Chlorophenylphenyl Ether	ND	8	Nitrobenzene	ND	2
4-Chloro-3-Methylphenol	ND	8	2-Nitrophenol	ND	10
Chrysene	ND	8	4-Nitrophenol	ND	13
Dibenzofuran	ND	2	N-Nitrosodiphenylamine	ND	4
Dibenzo(a,h)Anthracene	ND	8	N-Nitroso-Di-n-Propylamine	ND	6
1,2-Dichlorobenzene	ND	3	Pentachlorophenol	ND	15
1,3-Dichlorobenzene	ND	3	Phenanthrene	ND	2
1,4-Dichlorobenzene	ND	3	Phenol	ND	4
3,3'-Dichlorobenzidine	ND	10	Pyrene	ND	2
2,4-Dichlorophenol	ND	6	1,2,4-Trichlorobenzene	ND	3
Diethylphthalate	ND	2	2,4,5-Trichlorophenol	ND	6
2,4-Dimethylphenol	ND	6	2,4,6-Trichlorophenol	ND	6
Dimethylphthalate	ND	2			

(*) ND = Not detected above the listed detection limit.

(*) ND = Not detected above the listed detection limit.

Analyst Notes: _____

Attachment: 2

ORGANIC ANALYSIS DATA

6E-HL Sample NO:3TFA0W40-02

Date Reported: 06-Aug-93

Analyst: M. HUMPHREY

Matrix: WATER

TENTATIVELY IDENTIFIED SEMI-VOLATILE COMPOUNDS BY METHOD 625

units: ug/L

RT (min)	CAS #	COMPOUND NAME (*)	Estimated Concentration (**)
		No ABN TIC's detected in this sample.	

(*) ANALYSTS NOTE: The compounds listed are tentatively identified by the best match with the NIH/EPA/Wiley mass spectral data base or by manual interpretation. Standards were not available for confirmation or quantitation.

(**) Estimated concentration is based on a Response Factor of 1.0 to the nearest internal standard.

ORGANIC ANALYSIS DATA

6E-HL SAMPLE NO: 3TFADW40-02 DATE REPORTED: 10-Aug-93

ANALYST: F. Edward O'Neill SAMPLE TYPE: water

VOLATILE COMPOUNDS BY METHOD 624 units: ug/L

CAS#	Compound Name	Results*	Det Limits
67-64-1	acetone	ND	5
107-02-8	acrolein	ND	100
107-13-1	acrylonitrile	ND	100
71-43-2	benzene	ND	2
75-27-4	bromodichloromethane	ND	2
75-25-2	bromoform	ND	2
74-83-9	bromomethane	ND	5
78-93-3	2-butanone	ND	5
75-15-0	carbon disulfide	ND	5
56-23-5	carbon tetrachloride	ND	2
108-90-7	chlorobenzene	ND	2
75-00-3	chloroethane	ND	5
67-66-3	chloroform	ND	2
74-87-3	chloromethane	ND	5
124-48-1	dibromochloromethane	ND	2
75-34-3	1,1-dichloroethane	ND	2
107-06-2	1,2-dichloroethane	ND	2
75-35-4	1,1-dichloroethene	ND	2
156-59-2	cis-1,2-dichloroethene	ND	2
156-60-5	trans-1,2-dichloroethene	ND	2
78-87-5	1,2-dichloropropane	ND	2
10061-01-5	cis-1,3-dichloropropene	ND	2
10061-02-6	trans-1,3-dichloropropene	ND	2
100-41-4	ethylbenzene	ND	5
519-78-6	2-hexanone	ND	5
75-09-2	methylene chloride	ND	5
108-10-1	4-methyl-2-pentanone	ND	5
100-42-5	styrene	ND	5
79-34-5	1,1,2,2-tetrachloroethane	ND	2
127-18-4	tetrachloroethene	ND	2
108-88-3	toluene	ND	5
71-55-6	1,1,1-trichloroethane	ND	2
79-00-5	1,1,2-trichloroethane	ND	2
79-01-6	trichloroethene	ND	2
75-01-4	vinyl chloride	ND	5
108-38-3	m- and/or (CAS# 106-42-3)p-xylene	ND	5
95-47-6	o-xylene	ND	5

(*) ND = Not detected above the listed detection limit.

ORGANIC ANALYSIS DATA

6E-HL SAMPLE NO: 3TFADW40-02 DATE REPORTED: 10-Aug-93

ANALYST:F. Edward O'Neill SAMPLE TYPE: water

TENTATIVELY IDENTIFIED VOLATILE COMPOUNDS BY METHOD 624

(min) RT	CAS#	COMPOUND NAME *	ug/L EST. CONC.
		No VOA TIC's detected in this sample.	

* ANALYSTS NOTE - THE COMPOUNDS LISTED ARE TENTATIVELY IDENTIFIED BY THE BEST MATCH WITH THE NIH/EPA/WILEY MASS SPECTRAL DATA BASE OR BY MANUAL INTERPRETATION. STANDARDS WERE NOT AVAILABLE FOR CONFIRMATION OR QUANTITATION.

**Estimated concentration is based on a RF of 1.0 to internal standard

PESTICIDE/PCB ANALYSIS

OES-HL SAMPLE NO.: 3TFN0U40-00 DATE REPORTED: 9 /1987

SAMPLE TYPE: WATER MILES ROAD LANDFILL

ANALYST: LARRY STRECK

CAS#		UG/L (PPB)
319-84-6	alpha-BHC	ND DL=< 0.05
319-85-7	beta-BHC	ND DL=< 0.05
319-86-8	delta-BHC	ND DL=< 0.05
58-89-9	gamma-BHC (Lindane)	ND DL=< 0.05
76-44-8	Heptachlor	ND DL=< 0.05
309-00-2	Aldrin	ND DL=< 0.05
1024-57-3	Heptachlor epoxide	ND DL=< 0.05
959-98-8	Endosulfan I	ND DL=< 0.05
60-57-1	Dieldrin	ND DL=< 0.10
72-55-9	4,4'-DDE	ND DL=< 0.10
72-20-8	Endrin	ND DL=< 0.10
33213-65-9	Endosulfan II	ND DL=< 0.10
72-54-8	4,4'-DDD	ND DL=< 0.10
7421-93-4	Endrin aldehyde	ND DL=< 0.10
53494-70-5	Endrin ketone	ND DL=< 0.10
1031-07-8	Endosulfan sulfate	ND DL=< 0.10
50-29-3	4,4'-DDT	ND DL=< 0.10
72-43-5	Methoxychlor	ND DL=< 0.50
5103-71-9	alpha-Chlordane	ND DL=< 0.05
5103-74-2	gamma-Chlordane	ND DL=< 0.05
8001-35-2	Toxaphene	ND DL=< 5.00
12674-11-2	Aroclor-1016	ND DL=< 1.00
11104-28-2	Aroclor-1221	ND DL=< 2.00
11141-16-5	Aroclor-1232	ND DL=< 1.00
53469-21-9	Aroclor-1242	ND DL=< 1.00
12672-29-6	Aroclor-1248	ND DL=< 1.00
11097-69-1	Aroclor-1254	ND DL=< 1.00
11096-82-5	Aroclor-1260	ND DL=< 1.00

ND DL = NOT DETECTED, DETECTION LIMIT

US EPA HOUSTON BRANCH

SAMPLE #:	3TFADW40-02	DATE	
SOURCE:	MILES ROAD LANDFILL	RECEIVED:	13-Jul-93
TYPE:	AQUEOUS	DATE	
ANALYSTS:	RC, LC, JL	REPORTED:	12-Aug-93

PARAMETER	CONCENTRATION	DETECTION LIMIT <=	UNITS
ALUMINUM	ND	100	UG/L
ANTIMONY	ND	60	UG/L
ARSENIC	ND	5.8	UG/L
BARIUM	37	10	UG/L
BERYLLIUM	ND	5	UG/L
CADMIUM	ND	5	UG/L
CALCIUM	70200	150	UG/L
CHROMIUM	ND	10	UG/L
COBALT	ND	20	UG/L
COPPER	29	20	UG/L
IRON	42	25	UG/L
LEAD	ND	3.3	UG/L
MAGNESIUM	16900	150	UG/L
MANGANESE	21	5	UG/L
MERCURY	ND	0.2	UG/L
NICKEL	ND	20	UG/L
POTASSIUM	ND	1000	UG/L
SELENIUM	ND	5.8	UG/L
SILVER	ND	10	UG/L
SODIUM	158000	500	UG/L
THALLIUM	ND	10	UG/L
VANADIUM	ND	30	UG/L
ZINC	199	20	UG/L
CYANIDE	ND	0.02	MG/L

ND: LESS THAN DETECTION LIMIT

August 12, 1993

U.S. Environmental Protection Agency

Houston Branch Management System

Report for Sample Number 3TFADW4003

Source: MILES ROAD LANDFILL

Site Description: STA #15, TRIP BLANK

Date/Time Received: 7/13/93 10:00

Date/Time Collected: 7/12/93 12:00

Sample Type: DW

Date Completed: 8/12/93

Comments:

Parameter	Description	Section	Status	Report Date
ABN	ACID/BASE NEUTRALS	ORGANIC	COMPLETE	8/12/93
CN	CYANIDE	INORGANIC	COMPLETE	8/12/93
HSL	HAZARDOUS SUBSTANCE LIST	METALS	COMPLETE	8/12/93
PCB	POLYCHLORINATED BIPHENYLS	ORGANIC	COMPLETE	8/12/93
PES	PESTICIDES	ORGANIC	COMPLETE	8/12/93
VOA	VOLATILE ORGANIC ANALYSIS	ORGANIC	COMPLETE	8/12/93

ORGANIC ANALYSIS DATA

6E-HL Sample NO: 3TFAD440-03 Date Reported: 06-Aug-93

Analyst: M. HUMPHREY Sample Type: WATER

SEMI-VOLATILE COMPOUNDS BY METHOD 625

Compound Name	Results*	Det Limits (units: ug/L)	Compound Name	Results*	Det Limits (units: ug/L)
Acenaphthene	ND	2	2,4-Dinitrophenol	ND	30
Acenaphthylene	ND	2	2,4-Dinitrotoluene	ND	6
Anthracene	ND	2	2,6-Dinitrotoluene	ND	6
Benzidine	ND	20	4,6-Dinitro-2-Methylphenol	ND	20
Benzoic Acid	ND	10	Di-n-Butylphthalate	ND	2
Benzo(a)Anthracene	ND	8	Di-n-Octyl Phthalate	ND	4
Benzo(a)Pyrene	ND	8	Fluoranthene	ND	2
Benzo(b)Fluoranthene	ND	8	Fluorene	ND	2
Benzo(g,h,i)Perylene	ND	8	Hexachlorobenzene	ND	2
Benzo(k)Fluoranthene	ND	8	Hexachlorobutadiene	ND	5
Benzyl Alcohol	ND	4	Hexachlorocyclopentadiene	ND	10
bis(2-Chloroethoxy)Methane	ND	2	Hexachloroethane	ND	3
bis(2-Chloroethyl) Ether	ND	2	Indeno(1,2,3-cd) Pyrene	ND	8
bis(2-chloroisopropyl)Ether	ND	2	Isophorone	ND	4
bis-(2-Ethylhexyl)Phthalate	ND	4	2-Methylnaphthalene	ND	2
4-Bromophenylphenyl Ether	ND	8	2-Methylphenol	ND	6
Butylbenzylphthalate	ND	4	4-Methylphenol	ND	6
Carbazole	ND	10	Naphthalene	ND	2
4-Chloroaniline	ND	4	2-Nitroaniline	ND	8
2-Chloronaphthalene	ND	2	3-Nitroaniline	ND	8
2-Chlorophenol	ND	4	4-Nitroaniline	ND	8
4-Chlorophenylphenyl Ether	ND	8	Nitrobenzene	ND	2
4-Chloro-3-Methylphenol	ND	8	2-Nitrophenol	ND	10
Chrysene	ND	8	4-Nitrophenol	ND	13
Dibenzofuran	ND	2	N-Nitrosodiphenylamine	ND	4
Dibenzo(a,h)Anthracene	ND	8	N-Nitroso-Di-n-Propylamine	ND	6
1,2-Dichlorobenzene	ND	3	Pentachlorophenol	ND	15
1,3-Dichlorobenzene	ND	3	Phenanthrene	ND	2
1,4-Dichlorobenzene	ND	3	Phenol	ND	4
3,3'-Dichlorobenzidine	ND	10	Pyrene	ND	2
2,4-Dichlorophenol	ND	6	1,2,4-Trichlorobenzene	ND	3
Diethylphthalate	ND	2	2,4,5-Trichlorophenol	ND	6
2,4-Dimethylphenol	ND	6	2,4,6-Trichlorophenol	ND	6
Dimethylphthalate	ND	2			

(*) ND = Not detected above the listed detection limit.

(*) ND = Not detected above the listed detection limit.

Analyst Notes: _____

Attachment: 3

ORGANIC ANALYSIS DATA

6E-HL Sample NO:3TFA0W40-03

Date Reported: 06-Aug-93

Analyst: M. HUMPHREY

Matrix: WATER

TENTATIVELY IDENTIFIED SEMI-VOLATILE COMPOUNDS BY METHOD 625

units: ug/L

RT (min)	CAS #	COMPOUND NAME (*)	Estimated Concentration (**)
		No ABN TIC's detected in this sample.	

(*) ANALYSTS NOTE: The compounds listed are tentatively identified by the best match with the NIH/EPA/Wiley mass spectral data base or by manual interpretation. Standards were not available for confirmation or quantitation.

(**) Estimated concentration is based on a Response Factor of 1.0 to the nearest internal standard.

ORGANIC ANALYSIS DATA

6E-HL SAMPLE NO: 3TFADW40-03 DATE REPORTED: 10-Aug-93

ANALYST: F. Edward O'Neill SAMPLE TYPE: water

VOLATILE COMPOUNDS BY METHOD 624 units: ug/L

CAS#	Compound Name	Results*	Det Limits
67-64-1	acetone	ND	5
107-02-8	acrolein	ND	100
107-13-1	acrylonitrile	ND	100
71-43-2	benzene	ND	2
75-27-4	bromodichloromethane	ND	2
75-25-2	bromoform	ND	2
74-83-9	bromomethane	ND	5
78-93-3	2-butanone	ND	5
75-15-0	carbon disulfide	ND	5
56-23-5	carbon tetrachloride	ND	2
108-90-7	chlorobenzene	ND	2
75-00-3	chloroethane	ND	5
67-66-3	chloroform	ND	2
74-87-3	chloromethane	ND	5
124-48-1	dibromochloromethane	ND	2
75-34-3	1,1-dichloroethane	ND	2
107-06-2	1,2-dichloroethane	ND	2
75-35-4	1,1-dichloroethene	ND	2
156-59-2	cis-1,2-dichloroethene	ND	2
156-60-5	trans-1,2-dichloroethene	ND	2
78-87-5	1,2-dichloropropane	ND	2
10061-01-5	cis-1,3-dichloropropene	ND	2
10061-02-6	trans-1,3-dichloropropene	ND	2
100-41-4	ethylbenzene	ND	5
519-78-6	2-hexanone	ND	5
75-09-2	methylene chloride	ND	5
108-10-1	4-methyl-2-pentanone	ND	5
100-42-5	styrene	ND	5
79-34-5	1,1,2,2-tetrachloroethane	ND	2
127-18-4	tetrachloroethene	ND	2
108-88-3	toluene	ND	5
71-55-6	1,1,1-trichloroethane	ND	2
79-00-5	1,1,2-trichloroethane	ND	2
79-01-6	trichloroethene	ND	2
75-01-4	vinyl chloride	ND	5
108-38-3	m- and/or (CAS# 106-42-?)p-xylene	ND	5
95-47-6	o-xylene	ND	5

(*) ND = Not detected above the listed detection limit.

ORGANIC ANALYSIS DATA

6E-HL SAMPLE NO: 3TFADW40-03 DATE REPORTED: 10-Aug-93

ANALYST: F. Edward O'Neill SAMPLE TYPE: water

TENTATIVELY IDENTIFIED VOLATILE COMPOUNDS BY METHOD 624

(min) RT	CAS#	COMPOUND NAME *	ug/L EST. CONC.
		No VOA TIC's detected in this sample.	

* ANALYSTS NOTE - THE COMPOUNDS LISTED ARE TENTATIVELY IDENTIFIED BY THE BEST MATCH WITH THE NIH/EPA/WILEY MASS SPECTRAL DATA BASE OR BY MANUAL INTERPRETATION. STANDARDS WERE NOT AVAILABLE FOR CONFIRMATION OR QUANTITATION.

**Estimated concentration is based on a RF of 1.0 to internal standard

Attachment 3

PESTICIDE/PCB ANALYSIS

6ES-HL SAMPLE NO.: 3TFADW40-03 DATE REPORTED: 8 / 6/1993

SAMPLE TYPE: WATER MILES ROAD LANDFILL

ANALYST: LARRY STRECK

CAS#		UG/L (PPB)
319-84-6	alpha-BHC	ND DL=< 0.05
319-85-7	beta-BHC	ND DL=< 0.05
319-86-8	delta-BHC	ND DL=< 0.05
58-89-9	gamma-BHC (Lindane)	ND DL=< 0.05
76-44-8	Heptachlor	ND DL=< 0.05
309-00-2	Aldrin	ND DL=< 0.05
1024-57-3	Heptachlor epoxide	ND DL=< 0.05
959-98-8	Endosulfan I	ND DL=< 0.05
60-57-1	Dieldrin	ND DL=< 0.05
72-55-9	4,4'-DDE	ND DL=< 0.10
72-20-8	Endrin	ND DL=< 0.10
33213-65-9	Endosulfan II	ND DL=< 0.10
72-54-8	4,4'-DDD	ND DL=< 0.10
7421-93-4	Endrin aldehyde	ND DL=< 0.10
5103-71-9	alpha-Chlordane	ND DL=< 0.10
1031-07-8	Endosulfan sulfate	ND DL=< 0.10
50-29-3	4,4'-DDT	ND DL=< 0.10
72-43-5	Methoxychlor	ND DL=< 0.50
5103-74-2	gamma-Chlordane	ND DL=< 0.05
8001-35-2	Toxaphene	ND DL=< 5.00
12674-11-2	Aroclor-1016	ND DL=< 1.00
11104-28-2	Aroclor-1221	ND DL=< 2.00
11141-16-5	Aroclor-1232	ND DL=< 1.00
53469-21-9	Aroclor-1242	ND DL=< 1.00
12672-29-6	Aroclor-1248	ND DL=< 1.00
11097-69-1	Aroclor-1254	ND DL=< 1.00
11096-82-5	Aroclor-1260	ND DL=< 1.00

ND DL = NOT DETECTED, DETECTION LIMIT

US EPA HOUSTON BRANCH

SAMPLE #:	3TFADW40-03	DATE RECEIVED:	13-Jul-93
SOURCE:	MILES ROAD LANDFILL		
TYPE:	AQUEOUS	DATE REPORTED:	12-Aug-93
ANALYSTS:	RC, LC, JL		

PARAMETER	CONCENTRATION	DETECTION LIMIT <=	UNITS
ALUMINUM	ND	100	UG/L
ANTIMONY	ND	60	UG/L
ARSENIC	ND	5.8	UG/L
BARIUM	ND	10	UG/L
BERYLLIUM	ND	5	UG/L
CADMIUM	ND	5	UG/L
CALCIUM	ND	150	UG/L
CHROMIUM	ND	10	UG/L
COBALT	ND	20	UG/L
COPPER	ND	20	UG/L
IRON	ND	25	UG/L
LEAD	ND	3.3	UG/L
MAGNESIUM	ND	150	UG/L
MANGANESE	ND	5	UG/L
MERCURY	ND	0.2	UG/L
NICKEL	ND	20	UG/L
POTASSIUM	ND	1000	UG/L
SELENIUM	ND	5.8	UG/L
SILVER	ND	10	UG/L
SODIUM	ND	500	UG/L
THALLIUM	ND	10	UG/L
VANADIUM	ND	30	UG/L
ZINC	ND	20	UG/L
CYANIDE	ND	0.02	MG/L

ND: LESS THAN DETECTION LIMIT

August 12, 1993

U.S. Environmental Protection Agency

Houston Branch Management System

Report for Sample Number 3TFADW4004

Source: MILES ROAD LANDFILL

Site Description: STA #10 (b) (6) WELL

Date/Time Received: 7/13/93 10:00

Date/Time Collected: 7/12/93 16:30

Sample Type: DW

Date Completed: 8/12/93

Comments:

Parameter	Description	Section	Status	Report Date
ABN	ACID/BASE NEUTRALS	ORGANIC	COMPLETE	8/12/93
CN	CYANIDE	INORGANIC	COMPLETE	8/12/93
HSL	HAZARDOUS SUBSTANCE LIST	METALS	COMPLETE	8/12/93
PCB	POLYCHLORINATED BIPHENYLS	ORGANIC	COMPLETE	8/12/93
PES	PESTICIDES	ORGANIC	COMPLETE	8/12/93
VOA	VOLATILE ORGANIC ANALYSIS	ORGANIC	COMPLETE	8/12/93

ORGANIC ANALYSIS DATA

6E-HL Sample NO: 3TFA0W40-04 Date Reported: 06-Aug-93

Analyst: M. HUMPHREY Sample Type: WATER

SEMI-VOLATILE COMPOUNDS BY METHOD 625

Compound Name	Results*	Det Limits (units: ug/L)	Compound Name	Results*	Det Limits (units: ug/L)
Acenaphthene	ND	2	2,4-Dinitrophenol	ND	30
Acenaphthylene	ND	2	2,4-Dinitrotoluene	ND	6
Anthracene	ND	2	2,6-Dinitrotoluene	ND	6
Benzidine	ND	20	4,6-Dinitro-2-Methylphenol	ND	20
Benzoic Acid	ND	10	Di-n-Butylphthalate	ND	2
Benzo(a)Anthracene	ND	8	Di-n-Octyl Phthalate	ND	4
Benzo(a)Pyrene	ND	8	Fluoranthene	ND	2
Benzo(b)Fluoranthene	ND	8	Fluorene	ND	2
Benzo(g,h,i)Perylene	ND	8	Hexachlorobenzene	ND	2
Benzo(k)Fluoranthene	ND	8	Hexachlorobutadiene	ND	5
Benzyl Alcohol	ND	4	Hexachlorocyclopentadiene	ND	10
bis(2-Chloroethoxy)Methane	ND	2	Hexachloroethane	ND	3
bis(2-Chloroethyl) Ether	ND	2	Indeno(1,2,3-cd) Pyrene	ND	8
bis(2-chloroisopropyl)Ether	ND	2	Isophorone	ND	4
bis-(2-Ethylhexyl)Phthalate	ND	4	2-Methylnaphthalene	ND	2
4-Bromophenylphenyl Ether	ND	8	2-Methylphenol	ND	6
Butylbenzylphthalate	ND	4	4-Methylphenol	ND	6
Carbazole	ND	10	Naphthalene	ND	2
4-Chloroaniline	ND	4	2-Nitroaniline	ND	8
2-Chloronaphthalene	ND	2	3-Nitroaniline	ND	8
2-Chlorophenol	ND	4	4-Nitroaniline	ND	8
4-Chlorophenylphenyl Ether	ND	8	Nitrobenzene	ND	2
4-Chloro-3-Methylphenol	ND	8	2-Nitrophenol	ND	10
Chrysene	ND	8	4-Nitrophenol	ND	13
Dibenzofuran	ND	2	N-Nitrosodiphenylamine	ND	4
Dibenzo(a,h)Anthracene	ND	8	N-Nitroso-Di-n-Propylamine	ND	6
1,2-Dichlorobenzene	ND	3	Pentachlorophenol	ND	15
1,3-Dichlorobenzene	ND	3	Phenanthrene	ND	2
1,4-Dichlorobenzene	ND	3	Phenol	ND	4
3,3'-Dichlorobenzidine	ND	10	Pyrene	ND	2
2,4-Dichlorophenol	ND	6	1,2,4-Trichlorobenzene	ND	3
Diethylphthalate	ND	2	2,4,5-Trichlorophenol	ND	6
2,4-Dimethylphenol	ND	6	2,4,6-Trichlorophenol	ND	6
DimethylPhthalate	ND	2			

(*) ND = Not detected above the listed detection limit.

(*) ND = Not detected above the listed detection limit.

Analyst Notes: _____

Attachment: 4

ORGANIC ANALYSIS DATA

6E-HL Sample NO:3TFAD440-04

Date Reported: 06-Aug-93

Analyst: H. HUMPHREY

Matrix: WATER

TENTATIVELY IDENTIFIED SEMI-VOLATILE COMPOUNDS BY METHOD 625

units: ug/L

RT (min)	CAS #	COMPOUND NAME (*)	Estimated Concentration (**)
12.6		UNKNOWN	8

(*) ANALYSTS NOTE: The compounds listed are tentatively identified by the best match with the NIH/EPA/Wiley mass spectral data base or by manual interpretation. Standards were not available for confirmation or quantitation.

(**) Estimated concentration is based on a Response Factor of 1.0 to the nearest internal standard.

ORGANIC ANALYSIS DATA

6E-HL SAMPLE NO: 3TFADW40-04 DATE REPORTED: 10-Aug-93

ANALYST: F. Edward O'Neill SAMPLE TYPE: water

VOLATILE COMPOUNDS BY METHOD 624 units: ug/L

CAS#	Compound Name	Results*	Det Limits
67-64-1	acetone	ND	5
107-02-8	acrolein	ND	100
107-13-1	acrylonitrile	ND	100
71-43-2	benzene	ND	2
75-27-4	bromodichloromethane	ND	2
75-25-2	bromoform	ND	2
74-83-9	bromomethane	ND	5
78-93-3	2-butanone	ND	5
75-15-0	carbon disulfide	ND	5
56-23-5	carbon tetrachloride	ND	2
108-90-7	chlorobenzene	ND	2
75-00-3	chloroethane	ND	5
67-66-3	chloroform	ND	2
74-87-3	chloromethane	ND	5
124-48-1	dibromochloromethane	ND	2
75-34-3	1,1-dichloroethane	ND	2
107-06-2	1,2-dichloroethane	ND	2
75-35-4	1,1-dichloroethene	ND	2
156-59-2	cis-1,2-dichloroethene	ND	2
156-60-5	trans-1,2-dichloroethene	ND	2
78-87-5	1,2-dichloropropane	ND	2
10061-01-5	cis-1,3-dichloropropene	ND	2
10061-02-6	trans-1,3-dichloropropene	ND	2
100-41-4	ethylbenzene	ND	5
519-78-6	2-hexanone	ND	5
75-09-2	methylene chloride	ND	5
108-10-1	4-methyl-2-pentanone	ND	5
100-42-5	styrene	ND	5
79-34-5	1,1,2,2-tetrachloroethane	ND	2
127-18-4	tetrachloroethene	ND	2
108-88-3	toluene	ND	5
71-55-6	1,1,1-trichloroethane	ND	2
79-00-5	1,1,2-trichloroethane	ND	2
79-01-6	trichloroethene	ND	2
75-01-4	vinyl chloride	ND	5
108-38-3	m- and/or (CAS# 106-42-3)p-xylene	ND	5
95-47-6	o-xylene	ND	5

(*) ND = Not detected above the listed detection limit.

ORGANIC ANALYSIS DATA

6E-HL SAMPLE NO: 3TFADW40-04 DATE REPORTED: 10-Aug-93

ANALYST: F. Edward O'Neill SAMPLE TYPE: water

TENTATIVELY IDENTIFIED VOLATILE COMPOUNDS BY METHOD 624

(min) RT	CAS#	COMPOUND NAME *	ug/L EST. CONC.
		No VOA TIC's detected in this sample.	

* ANALYSTS NOTE - THE COMPOUNDS LISTED ARE TENTATIVELY IDENTIFIED BY THE BEST MATCH WITH THE NIH/EPA/WILEY MASS SPECTRAL DATA BASE OR BY MANUAL INTERPRETATION. STANDARDS WERE NOT AVAILABLE FOR CONFIRMATION OR QUANTITATION.

**Estimated concentration is based on a RF of 1.0 to internal standard

Attachment 4

PESTICIDE/PCB ANALYSIS

6ES-HL SAMPLE NO.: 3TFADW40-04 DATE REPORTED: 8 / 6/1993

SAMPLE TYPE: WATER MILES ROAD LANDFILL

ANALYST: LARRY STRECK

CAS#		UG/L (PPB)
319-84-6	alpha-BHC	ND DL=< 0.05
319-85-7	beta-BHC	ND DL=< 0.05
319-86-8	delta-BHC	ND DL=< 0.05
58-89-9	gamma-BHC (Lindane)	ND DL=< 0.05
76-44-8	Heptachlor	ND DL=< 0.05
309-00-2	Aldrin	ND DL=< 0.05
1024-57-3	Heptachlor epoxide	ND DL=< 0.05
959-98-8	Endosulfan I	ND DL= 0.05
60-57-1	Dieldrin	ND DL= 0.05
72-55-9	4,4 -DDE	ND DL=< 0.10
72-20-8	End	ND DL= 0.10
33213-65-	Endosulfan II	ND DL= 0.10
72-54-8	4,4'-DDD	ND DL= 0.10
7421-93-4	Endrin aldehyde	ND DL= 0.10
53494-70-5	Endrin ketone	ND DL= 0.10
1031-07-8	Endosulfan sulfate	ND DL= 0.10
50-29-3	4,4'-DDT	ND DL= 0.10
[illegible]	Methoxychlor	[illegible]
5103-71-9	alpha-Chlordane	ND DL= 0.05
5103-74-2	gamma-Chlordane	ND DL= 0.05
8001-35-2	Toxaphene	ND DL= 5.00
12674-11-2	Aroclor-1016	ND DL= 1.00
11104-28-2	Aroclor-1221	ND DL= 2.00
11141-16-5	Aroclor-1232	ND DL= 1.00
53469-21-9	Aroclor-1242	ND DL= 1.00
12672-29-6	Aroclor-1248	ND DL= 1.00
11097-69-1	Aroclor-1254	ND DL= 1.00
11096-82-5	Aroclor-1260	ND DL= 1.00

ND DL = NOT DETECTED AT OR ABOVE DETECTION LIMIT

US EPA HOUSTON BRANCH

SAMPLE #:	3TFADW40-04	DATE RECEIVED:	13-Jul-93
SOURCE:	MILES ROAD LANDFILL		
TYPE:	AQUEOUS	DATE REPORTED:	12-Aug-93
ANALYSTS:	RC, LC, JL		

PARAMETER	CONCENTRATION	DETECTION LIMIT <=	UNITS
ALUMINUM	132	100	UG/L
ANTIMONY	ND	60	UG/L
ARSENIC	ND	5.8	UG/L
BARIUM	134	10	UG/L
BERYLLIUM	ND	5	UG/L
CADMIUM	ND	5	UG/L
CALCIUM	49600	150	UG/L
CHROMIUM	ND	10	UG/L
COBALT	ND	20	UG/L
COPPER	ND	20	UG/L
IRON	89	25	UG/L
LEAD	ND	3.3	UG/L
MAGNESIUM	5190	150	UG/L
MANGANESE	ND	5	UG/L
MERCURY	ND	0.2	UG/L
NICKEL	ND	20	UG/L
POTASSIUM	ND	1000	UG/L
SELENIUM	ND	5.8	UG/L
SILVER	ND	10	UG/L
SODIUM	65500	500	UG/L
THALLIUM	ND	10	UG/L
VANADIUM	ND	30	UG/L
ZINC	ND	20	UG/L
CYANIDE	ND	0.02	MG/L

ND: LESS THAN DETECTION LIMIT

ATTACHMENT 6
BACKGROUND SOIL SAMPLE DATA VALIDATION FOR THE CASTLE DRIVE
AND MILES ROAD LANDFILL

[illegible]

DATA QUALITY ASSURANCE REVIEW

Site Name: Castle Miles Landfill
Site Code: TXD980750368
Case Number: 20267

Laboratory: American Analytical - Broken Arrow, OK

Soil Samples: MFAP79, MFAP80, MFAP81, MFAP82, MFAP83, MFAP84, MFAP85, MFAP86, MFAP87, MFAP88, MFAP89, MFAP81D

The data package consists of 12 soil samples analyzed for TCL metals and cyanide. One sample was a duplicate.

1. Analytical Parameters: All samples were analyzed using low concentration samples.

2. Holding Times: All sample preparation and analysis were conducted within holding time limits.

3. Calibration Verification: There is no indication that the cyanide standard was distilled. All cyanide data is flagged as (J). All initial calibration verification results were within control limits. All continuing calibration verifications were conducted at the proper frequency and the results were within control limits.

4. Blanks: All blanks were at the IDL except copper and silver

   The blank concentrations for copper were generally above the IDL. The highest value was 4.8 mg/l. All sample analyte concentrations were less than five times this concentration and, therefore, were flagged (B).

   The blank concentration for silver was above the IDL, but did not affect the results since all sample concentrations were below the IDL.

5. Matrix Spike Recovery: The spike recovery (%R) was miscalculated for cyanide, mercury, and manganese. Corrections should be as follows:

ELEMENT/IONIC SPECIES	%R LISTED VALUE	TRUE VALUE
Hg	110.0	90.0
Mn	-363.5	-363.4
Cn	101.4	91.4

Spike recovery for barium and vanadium exceeded quality control limits. Analyte concentrations of these two elements are flagged (J).

All other matrix spikes were within quality control limits.

6. Duplicates: The relative percent difference for aluminum, iron, and manganese exceed the quality control limit of 35%. As such, analyte concentrations of these elements are flagged (J).

   The relative percent difference for all other elements meet the quality control criteria.

7. Laboratory Control Samples: Quality control criteria were met in all samples.

8. ICP Interference Check Sample (ICS): ICP interference check samples were analyzed at the specified frequency and the results were within control limits.

9. ICP Serial Dilution: Quality control criteria were met in all samples.

10. Furnace AA: Furnace Atomic Absorption Raw Data was not part of this validation package.

11. Sample Result Verification: Data package had no missing or incorrectly numbered pages.

12. Overall Assessment of Data: The data package is acceptable except for the following:

    a. Blank interference with copper analyte.
    b. Failure to dilute the mid-range cyanide standard.
    c. Duplicate relative difference for aluminum, iron and manganese being beyond control limits.
    d. Matrix Spike Recovery for barium and vanadium being beyond control limits.

CHEMICAL DATA SUMMARY

Site Name and Code: Castle Miles Landfill,TXD980750368
Case Number: 20267
Concentrations in milligrams/kilogram (mg/kg)
Compiled by: Fluor Daniel,Inc.

Traffic Number:	MFAP86		MFAP87		MFAP88		MFAP89		MFAP81D					
Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL					
Percent Solids:	80.5		73.5		80.2		82.1		79.4					
Location:	SS-08		SS-09		SS-10		SS-11		SS-03					
and or Sample Description:					BACKGROUND		BACKGROUND		DUPLICATE					
COMPOUND NAME	**CAS NO.**	**CLASS**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**
ALUMINUM	7429-90-5	INO	33,900.00	J	38,600.00	J	28,500.00	J	36,800.00	J	14,794.81	J		
ANTIMONY	7440-36-0	INO					19.00	U	19.00	U				
ARSENIC	7440-38-2	INO	4.30		4.80		3.00	U	3.40		4.30			
BARIUM	7440-39-3	INO	200.00	J	321.00	J	203.00	J	302.00	J	221.82	J		
BERYLLIUM	7440-41-7	INO	1.00	U	1.30		1.00	U	1.20		1.00	U		
CADMIUM	7440-43-9	INO					2.00	U	2.00	U				
CALCIUM	7440-70-2	INO	90,600.00		30,400		5,740.00		6,140.00		56,755.62			
CHROMIUM	7440-47-3	INO	28.20		32.60		21.90		29.00		13.37			
COBALT	7440-48-4	INO	7.80		17.90		5.00	U	14.20		6.81			
COPPER	7440-50-8	INO	10.90	B	13.30	B	9.90	B	11.30	B	14.42	B		
IRON	7439-89-6	INO	18,100.00	J	21,700.00	J	15,700.00	J	19,400.00	J	11,539.74	J		
LEAD	7439-92-1	INO	16.00		23.60		14.30		21.80		20.07			
MAGNESIUM	7439-95-4	INO	4,440.00		4,890.00		2,470.00		2,950.00		2,226.06			
MANGANESE	7439-96-5	INO	736.00	J	1,670.00	J	187.00	J	710.00	J	550.19	J		
MERCURY	7439-97-6	INO					0.20	U	0.20	U				
NICKEL	7440-02-0	INO	21.00	U	26.40		21.00	U	21.00	U	21.00	U		
POTASSIUM	7440-09-7	INO	2,640.00		2,970.00		1,140.00		1,770.00		1,202.54			
SELENIUM	7782-49-2	INO					4.00	U	4.00	U				
SILVER	7440-22-4	INO					3.00	U	3.00	U				
SODIUM	7440-23-5	INO	255.00		183.00		284.00		273.00		361.59			
THALLIUM	7440-28-0	INO					7.00	U	7.00	U				
VANADIUM	7440-62-2	INO	57.00	J	66.80	J	30.50	J	50.30	J	32.49	J		
ZINC	7440-66-6	INO	46.8		54.00		36.00		43.00		34.71			
CYANIDE		INO	10.00	U	10.00	U	10.00	U	10.00	U	10.00	U		

LEGEND
INO - Inorganic
B - Blank interference.Analyte conc. < 5x blank conc.
J - The associated value is an estimated quantity.
R - Date for analyte is unusable.
U - The material was analyzed for but was not detected above the level of the associated value.
UJ - The material was analyzed for but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

B:\CASTLEMLWK3

ORGANIC DATA VALIDATION

Case No.: 20267 Site: Castle Miles Landfill
Laboratory: ART No. of Samples: 19
SDG#: FAA59 Matrix: Soil and Water

Soil Samples: FA-A63, FA-A64, FA-A65, FA-A66, FA-A67, FA-A68, FA-A69, FA-A70, FA-A71, FA-A72, FA-A73

Water Samples: FA-A59, FA-A60, FA-A74, FA-A75, FA-A76, FA-A77, FA-A78, FA-A79

Comments: Eleven soil samples and eight water samples from the Castle Miles Landfill were analyzed. Anticipated concentrations were low. Samples were not analyzed within the allowable holding times. VOA, BNA, and pesticides data are provisional. Problems were encountered in the calibration of VOAs and BNAs and the pesticide analysis sequence was not acceptable because a standard was not analyzed after every fifth sample. All detectable concentrations are qualified as estimates.

1. **Holding Times**

   VOA: The solid samples met EPA QA/QC criteria but the water samples exceeded the allowed holding times. Reported VOA values in water samples were qualified as estimates.

   BNA: The water samples met the EPA QA/QC criteria but the extraction holding times were exceeded for all soil samples.

   Pest/PCB: The water samples met the EPA QA/QC criteria but the extraction holding times were exceeded for all soil samples. Reported Pest/PCB values in soil samples were qualified as estimates.

2. **Tuning/Performance**

   VOA: Meets EPA QA/QC criteria.

   BNA: Meets EPA QA/QC criteria.

   Pest/PCB: The Analysis Sequence did not meet EPA QA/QC criteria.

3. **Calibrations**

   VOA: %D for chloromethane, bromoform, and acetone all exceeded EPA QA/QC criterion of 25%.

BNA: %D for 2,4-Dinitrophenol exceeded EPA QA/QC criterion of 25%. Internal standards for samples FA-A63, FA-A64, FA-A69, FA-A70, FA-A71 and FA-A72 did not meet area requirements. Samples were rerun and internal standards were outside area specifications again.

Pest/PCB: %RSD for Linearity Check Compounds failed EPA QA/QC criterion of 10%. %D for standards failed EPA QA/QC criterion of 15% for quantative columns. %D for standards failed EPA QA/QC criterion of 20% for confirmatory columns.

4. Blanks

VOA: Meets EPA QA/QC criteria.

BNA: Meets EPA QA/QC criteria.

Pest/PCB: Meets EPA QA/QC criteria.

5. System Monitoring Compounds (SMCs)/Surrogates

VOA: Meets EPA QA/QC criteria.

BNA: Meets EPA QA/QC criteria.

Pest/PCB: Surrogate recoveries were not acceptable for samples FA-A59, FA-A76MS, and FA-A76MSD.

6. Matrix Spike/Matrix Spike Duplicates

VOA: Meets EPA QA/QC criteria.

BNA: MS and MSDs were out of compliance because reported values exceeded allowable ranges for recovery. Recovery of 4-Nitrophenol, Pentachlorophenol, 1,4-Dichlorobenzene, and 1,2,4-Trichlorobenzene did not meet standards.

Pest/PCB: Meets EPA QA/QC criteria.

7a. Compound Identity/Quantitation

VOA: Meets EPA QA/QC criteria.

BNA: Meets EPA QA/QC criteria.

Pest/PCB: Meets EPA QA/QC criteria.

7b. Data Completeness

VOA: Meets EPA QA/QC criteria.

BNA: Meets EPA QA/QC criteria.

Pest/PCB: Data package provided did not correspond to the requirements of the EPA data validation procedures.

8. Case Assessment

VOA: Water samples were not analyzed within the allowed holding times. Calibrations of several VOA parameters were out of compliance. Data are provisional.

BNA: Calibrations of a few SVOA parameters were out of compliance. Soil sample extracts were not analyzed within the allowed holding time. Data are provisional.

Pest/PCB: Calibrations of a few Pesticide/PCB parameters were out of compliance. The analytical sequence was not correct. Soil sample extracts were not analyzed within the allowed holding time. Data are provisional.

CHEMICAL DATA SUMMARY

Site Name and Code: Castle Mills LF TXD 980750366
Case Number: 20267
Concentrations in micrograms/kilogram (ug/kg) or ug/L
Compiled by: Fluor Daniel, Inc.

		Traffic Number:	FA-A68		FA-A69		FA-A70		FA-A71		FA-A72		FA-A73		FA-A74	
		Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		WATER	
		Percent Moisture:	20		19		22		26		20		19			
		Location and/or Sample Description:	SS-06		SS-07		SS-08		SS-09		SS-10 Background Sample		SS-11 Background Sample		GW-12	
COMPOUND NAME	CAS NO.	CLASS	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C
Chloromethane	74-87-3	VOA									12	U	12	U		
Bromomethane	74-83-9	VOA									12	U	12	U		
Vinyl Chloride	75-01-4	VOA	12	U	12	U	13	U	14	U	12	U	12	U	10	U
Chloroethane	75-00-3	VOA									12	U	12	U		
Methylene Chloride	75-09-2	VOA									12	U	12	U		
Acetone	67-64-1	VOA									12	U	12	U		
Carbon Disulfide	75-15-0	VOA									12	U	12	U		
1,1-Dichloroethene	75-35-4	VOA									12	U	12	U		
1,1-Dichloroethane	75-34-3	VOA	12	U	12	U	13	U	14	U	12	U	12	U	10	U
1,2-Dichloroethene (total)	540-59-0	VOA	12	U	12	U	13	U	14	U	12	U	12	U	10	U
Chloroform	67-66-3	VOA									12	U	12	U		
1,2-Dichloroethane	107-06-2	VOA									12	U	12	U		
2-Butanone	78-93-3	VOA									12	U	12	U		
1,1,1-Trichloroethane	71-55-6	VOA									12	U	12	U		
Carbon tetrachloride	56-23-5	VOA									12	U	12	U		
Bromodichloromethane	75-27-4	VOA									12	U	12	U		
1,2-Dichloropropane	78-87-5	VOA									12	U	12	U		
cis-1,3-Dichloropropene	10061-01-5	VOA									12	U	12	U		
Trichloroethene	79-01-6	VOA	12	U	12	U	13	U	14	U	12	U	12	U	10	U
Dibromochloromethane	124-48-1	VOA									12	U	12	U		
1,1,2-Trichloroethane	79-00-5	VOA									12	U	12	U		
Benzene	71-43-2	VOA									12	U	12	U		
Trans-1,3-Dichloropropene	10061-02-6	VOA									12	U	12	U		
Bromoform	75-25-2	VOA									12	U	12	U		
4-Methyl-2-Pentanone	108-10-1	VOA									12	U	12	U		
2-Hexanone	591-78-6	VOA									12	U	12	U		
Tetrachloroethene	127-18-4	VOA									12	U	12	U		
1,1,2,2-Tetrachloroethane	79-34-5	VOA									12	U	12	U		
Toluene	108-88-3	VOA									12	U	12	U		
Chlorobenzene	108-90-7	VOA									12	U	12	U		
Ethylbenzene	100-41-4	VOA									12	U	12	U		
Styrene	100-42-5	VOA									12	U	12	U		
Xylene (total)	1330-20-7	VOA									12	U	12	U		

LEGEND
U – The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.
B – Analyte was detected in the blank.
J – The associated numerical value is an estimated quantity.
R – Data for analyte is unusable (compound may or may not be present).
N– Presumptive evidence of presence of the material.
NJ– Presumptive evidence of the presence of the material at an estimated quantity.
UJ – The material was analyzed for, but was not detected. The sample quantitation limit is an estimated quantity.

B:\VOABLK

CHEMICAL DATA SUMMARY

Site Name and Code: Castle Miles LF TXD 980750368
Case Number: 20267
Concentrations in micrograms/kilogram (ug/kg) or ug/l.
Compiled by: Fluor Daniel, Inc.

		Traffic Number:	FA-A68		FA-A69		FA-A70		FA-A71		FA-A72		FA-A73		FA-A74	
		Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		WATER	
		Percent Moisture:	20		19		22		26		20		19			
		Location and/or Sample Description:	SS-06		SS-07		SS-08		SS-09		SS-10 Background Sample		SS-11 Background Sample		GW-12	
COMPOUND NAME	CAS NO.	CLASS	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C
Phenol	108-95-2	BNA									350	U	330	U		
bis(2-Chloroethyl)Ether	111-44-4	BNA									350	U	330	U		
2-Chlorophenol	95-57-8	BNA									350	U	330	U		
1,3-Dichlorobenzene	541-73-1	BNA									350	U	330	U		
1,4-Dichlorobenzene	106-46-7	BNA									350	U	330	U		
1,2-Dichlorobenzene	95-50-1	BNA									350	U	330	U		
2-Methylphenol	95-48-7	BNA									350	U	330	U		
2,2'-Oxybis(1-Chloropropane)	108-60-1	BNA									350	U	330	U		
4-Methylphenol	106-44-5	BNA									350	U	330	U		
N-Nitroso-Di-n-Propylamine	621-64-7	BNA									350	U	330	U		
Hexachloroethane	67-72-1	BNA									350	U	330	U		
Nitrobenzene	98-95-3	BNA									350	U	330	U		
Isophorone	78-59-1	BNA									350	U	330	U		
2-Nitrophenol	88-75-5	BNA									350	U	330	U		
2,4-Dimethylphenol	105-67-9	BNA									350	U	330	U		
bis(2-Chloroethoxy)Methane	111-91-1	BNA									350	U	330	U		
2,4-Dichlorophenol	120-83-2	BNA									350	U	330	U		
1,2,4-Trichlorobenzene	120-82-1	BNA									350	U	330	U		
Naphthalene	91-20-3	BNA									350	U	330	U		
4-Chloroaniline	106-47-8	BNA									350	U	330	U		
Hexachlorobutadiene	87-68-3	BNA									350	U	330	U		
4-Chloro-3-Methylphenol	59-50-7	BNA									350	U	330	U		
2-Methylnaphthalene	91-57-6	BNA									350	U	330	U		
Hexachlorocyclopentadiene	77-47-4	BNA									350	U	330	U		
2,4,6-Trichlorophenol	88-06-2	BNA									350	U	330	U		
2,4,5-Trichlorophenol	95-95-4	BNA									860	U	810	U		
2-Chloronaphthalene	91-58-7	BNA									350	U	330	U		
2-Nitroaniline	88-74-4	BNA									860	U	810	U		
Dimethyl Phthalate	131-11-3	BNA									350	U	330	U		
Acenaphthylene	208-96-8	BNA									350	U	330	U		
2,6-Dinitrotoluene	606-20-2	BNA									350	U	330	U		
3-Nitroaniline	99-09-2	BNA									860	U	810	U		
Acenaphthelene	83-32-9	BNA									350	U	330	U		

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B – Analyte was detected in the blank.
J – The associated numerical value is an estimated quantity.
R – Date for analyte is unusable (compound may or may not be present).
N – Presumptive evidence of presence of the material.
NJ – Presumptive evidence of the presence of the material at an estimated quantity.
UJ – The material was analyzed for, but was not detected. The sample quantitation limit is an estimated quantity.

B:\SVOABLK

CHEMICAL DATA SUMMARY

Site Name and Code: Castle Miles LF TXD 980750368
Case Number: 20267
Concentrations in micrograms/kilogram (ug/kg) or ug/l.
Compiled by: Fluor Daniel, Inc.

			FA-A68		FA-A69		FA-A70		FA-A71		FA-A72		FA-A73		FA-A74	
Traffic Number:																
Matrix:			SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		WATER	
Percent Moisture:			20		19		22		26		20		19			
Location and/or Sample Description:			SS-06		SS-07		SS-08		SS-09		SS-10 Background Sample		SS-11 Background Sample		GW-12	
COMPOUND NAME	CAS NO.	CLASS	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C
2,4-Dinitrophenol	51-28-5	BNA									860	U	810	U		
4-Nitrophenol	100-02-7	BNA									860	U	810	U		
Dibenzofuran	132-64-9	BNA									350	U	330	U		
2,4-Dinitrotoluene	121-14-2	BNA									350	U	330	U		
Diethylphthalate	84-66-2	BNA									350	U	330	U		
4-Chlorophenyl-phenylether	7005-72-3	BNA									350	U	330	U		
Fluorene	86-73-7	BNA									350	U	330	U		
4-Nitroaniline	100-01-6	BNA									860	U	810	U		
4,6-Dinitro-2-Methylphenol	534-52-1	BNA									860	U	810	U		
N-Nitrosodiphenylamine(1)	86-30-6	BNA									350	U	330	U		
4-Bromophenyl-phenylether	101-55-3	BNA									350	U	330	U		
Hexachlorobenzene	118-74-1	BNA									350	U	330	U		
Pentachlorophenol	87-86-5	BNA									860	U	810	U		
Phenanthrene	85-01-8	BNA									350	U	330	U		
Anthracene	120-12-7	BNA									350	U	330	U		
Carbazole	86-74-8	BNA									350	U	330	U		
Di-n-Butylphthalate	84-74-2	BNA									350	U	330	U		
Fluoranthene	206-44-0	BNA									350	U	330	U		
Pyrene	129-00-0	BNA									350	U	330	U		
Butylbenzylphthalate	85-68-7	BNA									350	U	330	U		
3,3'-Dichlorobenzidine	91-94-1	BNA									350	U	330	U		
Benzo(a)Anthracene	56-55-3	BNA									350	U	330	U		
Chrysene	218-01-9	BNA									350	U	330	U		
bis(2-Ethylhexyl)Phthalate	117-81-7	BNA									350	U	330	U		
Di-n-Octyl Phthalate	117-84-0	BNA									350	U	330	U		
Benzo(b)Fluoranthene	205-99-2	BNA									350	U	330	U		
Benzo(k)Fluoranthene	207-08-9	BNA									350	U	330	U		
Benzo(a)Pyrene	50-32-8	BNA									350	U	330	U		
Indeno(1,2,3-cd)Pyrene	193-39-5	BNA									350	U	330	U		
Dibenz(a,h)Anthracene	53-70-3	BNA									350	U	330	U		
Benzo(g,h,i)Perylene	191-24-2	BNA									350	U	330	U		

LEGEND
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.
B - Analyte was detected in the blank.
J - The associated numerical value is an estimated quantity.
R - Date for analyte is unusable (compound may or may not be present).
N - Presumptive evidence of presence of the material.
NJ - Presumptive evidence of the presence of the material at an estimated quantity.
UJ - The material was analyzed for, but was not detected. The sample quantitation limit is an estimated quantity.

B SVOABLK

CHEMICAL DATA SUMMARY

Site Name and Code: Castle Miles LF TXD 980750368
Case Number: 20267
Concentrations in micrograms/kilogram (ug/kg) or ug/l.
Compiled by: Fluor Daniel, Inc.

		Traffic Number:	FA-A68		FA-A69		FA-A70		FA-A71		FA-A72		FA-A73		FA-A74	
		Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		WATER	
		Percent Moisture:	17		19		22		27		19		18			
		Location and/or Sample Description:	SS-06		SS-07		SS-08		SS-09		SS-10 Background Sample		SS-11 Background Sample		GW-12	
COMPOUND NAME	CAS NO.	CLASS	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C
alpha-BHC	319-84-6	PEST/PCB									1.9	U	1.8	U		
beta-BHC	319-85-7	PEST/PCB									1.9	U	1.8	U		
delta-BHC	319-86-8	PEST/PCB									1.9	U	1.8	U		
gamma-BHC(Lindane)	58-89-9	PEST/PCB									1.9	U	1.8	U		
Heptachlor	76-44-8	PEST/PCB									1.9	U	1.8	U		
Aldrin	309-00-2	PEST/PCB									1.9	U	1.8	U		
Heptachlor epoxide	1024-57-3	PEST/PCB									1.9	U	1.8	U		
Endosulfan I	959-98-8	PEST/PCB									1.9	U	1.8	U		
Dieldren	60-57-1	PEST/PCB									3.6	U	3.5	U		
4,4'-DDE	72-55-9	PEST/PCB									3.6	U	3.5	U		
Endrin	72-20-8	PEST/PCB									3.6	U	3.5	U		
Endosulfan II	33213-65-9	PEST/PCB									3.6	U	3.5	U		
4,4'-DDD	72-54-8	PEST/PCB	3.6	U	3.4	U	3.6	U	4.0	U	3.6	U	3.5	U	0.10	U
Endosulfan sulfate	1031-07-8	PEST/PCB									3.6	U	3.5	U		
4,4'-DDT	50-29-3	PEST/PCB									3.6	U	3.5	U		
Methoxychlor	72-43-5	PEST/PCB									19	U	18	U		
Endrin ketone	53494-70-5	PEST/PCB	5.0	J	3.4	U	3.6	U	4.0	U	3.6	U	3.5	U	0.10	U
Endrin aldehyde	7421-93-4	PEST/PCB									3.6	U	3.5	U		
alpha-Chlordane	5103-71-9	PEST/PCB									1.9	U	1.8	U		
gamma-Chlordane	5103-74-2	PEST/PCB									1.9	U	1.8	U		
Toxaphene	8001-35-2	PEST/PCB									190	U	180	U		
Aroclor-1016	12674-11-2	PEST/PCB									36	U	35	U		
Aroclor-1221	11104-28-2	PEST/PCB									74	U	71	U		
Aroclor-1232	11141-16-5	PEST/PCB									36	U	35	U		
Aroclor-1242	53469-21-9	PEST/PCB									36	U	35	U		
Aroclor-1248	12672-29-6	PEST/PCB									36	U	35	U		
Aroclor-1254	11097-69-1	PEST/PCB									36	U	25	U		
Aroclor-1260	11096-82-5	PEST/PCB	49	J	34	U	36	U	40	U	36	U	35	U	1.0	U

LEGEND

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.
B - Analyte was detected in the blank.
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R - Date for analyte is unusable (compound may or may not be present).
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NJ - Presumptive evidence of the presence of the material at an estimated quantity.
UJ - The material was analyzed for, but was not detected. The sample quantitation limit is an estimated quantity.

B:\pestblk

CHEMICAL DATA SUMMARY

Sit[illegible] Name and Code: Castle Miles LF TXD 980750368
Cas[illegible] Number: 20267
Co[illegible]ntrations in micrograms/kilogram (ug/kg)
Compiled by: Fluor Daniel, Inc.

		Traffic Number:	FA-A68		FA-A69		FA-A70		FA-A71		FA-A72		FA-A73		FA-A74	
		Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		WATER	
		Percent Moisture:	20		19		22		26		20		*9			
		Location and/or Sample Description:	SS-06		SS-07		SS-08		SS-09		SS-10		SS-11		GW-12	
COMPOUND NAME	CAS NO.	CLASS	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C
		VOC														
Unknown		TIC	87	J												
Bromofluorobenzene isomer		TIC	59	J												
Dichlorofluoromethane	75-43-4	TIC														
		BNA														
Unknown		TIC	83	J	140	J	80	J	170	J	180	J				
C6.H10.O2 isomer		TIC			300	BJ	91	BJ					300	BJ		
Unknown		TIC	74	BJ	160	BJ	110	BJ	110	BJ	80	BJ	120	BJ		
Benzaldehyde	100-52-7	TIC														
Unknown		TIC	330	BJ	110	J	89	BJ	200	BJ	90	BJ	260	BJ		
Unknown		TIC	88	J	330	J	180	BJ	450	BJ	530	BJ	440	BJ		
Unknown HC		TIC	140	J			100	J	96	J	73	J	300	J		
Unknown HC		TIC	140	J					100	J	160	J	580	J		
Unknown		TIC	230	J	78	J	600	BJ	260	J	5600	J	220	J		
Unknown		TIC			84	J	2700	J	140	J	200	J	1600	J		
Unknown		TIC			320	BJ	180	J	4400	J	270	J	310	J		
Unknown		TIC							110	J			410	J		
Unknown		TIC							160	J			250	J		
Unknown		TIC							330	J			290	J		
Unknown HC		TIC	130	J					350	J	170	J	580	J		
Unknown HC		TIC	200	J					440	J	110	J				
Unknown HC		TIC														
Unknown		TIC											620	J		
Unknown [illegible]C		TIC														
Unknown HC		TIC														
2,3-Dichloro-2-Methylbutane	507-45-9	TIC			150	J	89	J	180	J						
Hexadecanoic acid	57-10-3	TIC											730	J		
Unknown acid		TIC											180	J		
Unknown		TIC											14000	J		
Unknown		TIC											3300	J		
Unknown		TIC											700	J		
Unknown		TIC											240	J		
Unknown		TIC											350	J		

LEGEND
U – The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.
B – Analyte was detected in the blank.
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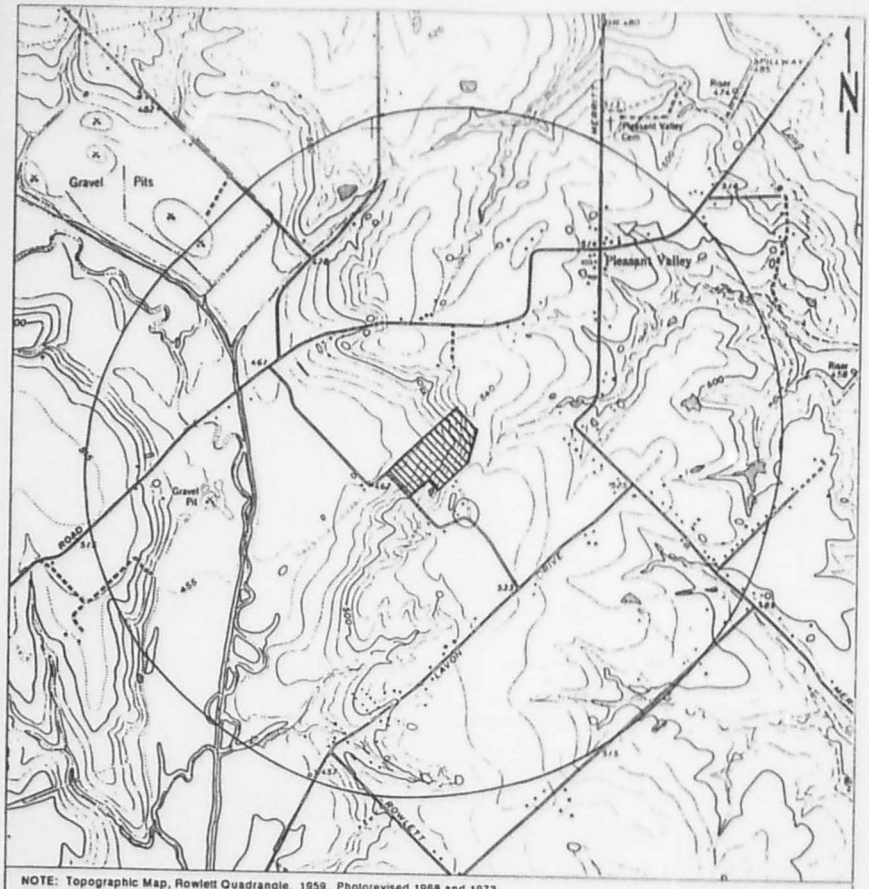
R – Data for analyte is unusable (compound may or may not be present).
N – Presumptive evidence of presence of the material.
NJ – Presumptive evidence of the presence of the material at an estimated quantity.
UJ – The material was analyzed for, but was not detected. The sample quantitation limit is an estimated quantity.

B:\VOABLK

Reference 1
U.S. Geological Survey, 7.5 minute topographic map, Rowlett, Tex., 1959 (photorevised 1968 and 1973).



Location Map
Miles Road Landfill
Garland, Texas

FLUOR DANIEL

Figure 1

Reference 2
Texas Department of Health, "Potential Hazardous Waste Site Identification and Preliminary Assessment", February 24, 1981.

EXAS DEPARTMENT OF HEALTH

EPA	POTENTIAL HAZARDOUS WASTE SITE IDENTIFICATION AND PRELIMINARY ASSESSMENT	REGION 6	SITE NUMBER (to be assigned by Hq) TX07048

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information submitted on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries and on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II (*Preliminary Assessment*). File this form in the Regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (*EN-335*); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION TXD 980697672

GARLAND CITY OF ~~... MILES ROAD~~

A. SITE NAME: Miles Road Landfill Site-#05/50586 ,

B. STREET (or other identifier): Miles Road, ½ mile NW of Castle Dr., NE side of road

C. CITY: Garland

D. STATE: TX

E. ZIP CODE: 75040

F. COUNTY NAME: Dallas 113

G. OWNER/OPERATOR (if known)

1. NAME: owner: Vaughn McCallum, RFD 2, Rowlett, TX — 2. TELEPHONE NUMBER: ph: 214/475-2912
operator: City of Garland — ph: 214/494-7100

H. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☒ 5. PRIVATE ☐ 6. UNKNOWN

I. SITE DESCRIPTION

This site was used as the city landfill from February 1973 to June 1975. No liquid or hazardous waste accepted at this site. Only municipal solid waste was accepted.

J. HOW IDENTIFIED (i.e., citizen's complaints, OSHA citations, etc.): North Central Texas COG

K. DATE IDENTIFIED (mo., day, & yr.): 9/23/80

L. PRINCIPAL STATE CONTACT

1. NAME: [signature], P.E.

2. TELEPHONE NUMBER: 512/458-7271

II. PRELIMINARY ASSESSMENT (complete this section last)

A. APPARENT SERIOUSNESS OF PROBLEM

☐ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☒ 4. NONE ☐ 5. UNKNOWN

B. RECOMMENDATION

☒ 1. NO ACTION NEEDED (no hazard)

☐ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:

☐ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:

☐ 4. SITE INSPECTION NEEDED (low priority)

C. PREPARER INFORMATION

1. NAME: Rex H. Hunt [signature: R.H. Hunt, P.E.]

2. TELEPHONE NUMBER: 817/460-3032

3. DATE (mo., day, & yr.): 02/24/81

III. SITE INFORMATION

A. SITE STATUS

☐ 1. ACTIVE (Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)

☒ 2. INACTIVE (Those sites which no longer receive wastes.)

☐ 3. OTHER (specify): (Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)

SUPERFUND FILE

FEB 2 4 1992

REORGANIZED

B. IS GENERATOR ON SITE?

☒ 1. NO ☐ 2. YES (specify generator's four-digit SIC Code):

C. AREA OF SITE (in acres): 45

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES

1. LATITUDE (deg.-min.-sec.): 32°57'

2. LONGITUDE (deg.-min.-sec.): 96°36'

E. ARE THERE BUILDINGS ON THE SITE?

☒ 1. NO ☐ 2. YES (specify):

000773

Continued From Front

V. CHARACTERIZATION OF SITE ACTIV

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

A. TRANSPORTER	B. STORER	C. TREATER	D. DISPOSER
		1. FILTRATION	XX 1. LANDFILL
2. SHIP	2. SURFACE IMPOUNDMENT	2. INCINERATION	2. LANDFARM
3. BARGE	3. DRUMS	3. VOLUME REDUCTION	3. OPEN DUMP
4. TRUCK	4. TANK, ABOVE GROUND	4. RECYCLING/RECOVERY	4. SURFACE IMPOUNDMENT
5. PIPELINE	5. TANK, BELOW GROUND	5. CHEM./PHYS. TREATMENT	5. MIDNIGHT DUMPING
6. OTHER (specify):	6. OTHER (specify):	6. BIOLOGICAL TREATMENT	6. INCINERATION
		7. WASTE OIL REPROCESSING	7. UNDERGROUND INJECTION
		8. SOLVENT RECOVERY	8. OTHER (specify):
		9. OTHER (specify):	

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

This site was used only for disposal of municipal solid waste. No hazardous or liquid waste was disposed of in this site.

V. WASTE RELATED INFORMATION

A. WASTE TYPE

1 UNKNOWN 2. LIQUID XX 3. SOLID 4. SLUDGE 5. GAS

B. WASTE CHARACTERISTICS

1 UNKNOWN 2. CORROSIVE 3. IGNITABLE 4 RADIOACTIVE 5 HIGHLY VOLATILE
6 TOXIC 7 REACTIVE 8 INERT 9 FLAMMABLE

XX 10. OTHER (specify): municipal solid waste

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

no records available

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT 67000	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE tons	UNIT OF MEASURE
(1) PAINT, PIGMENTS	(1) OILY WASTES	(1) HALOGENATED SOLVENTS	(1) ACIDS	(1) FLYASH	(1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (specify):	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify):	(3) CAUSTICS	(3) MILLING/ MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
(5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify)
			(6) CYANIDE	XX (6) OTHER (specify): municipal solid waste. Amount estimated based on an average population of 40000 served. Remainder of the population served by Quail Creek landfill.	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (specify)		

Continued From Page 2

V. WASTE RELATED INFORMATION (continued)

3. LIST SUBSTANCES OF GREATEST CONCERN WHICH MAY BE ON THE SITE (place in descending order of hazard):

As this site accepted only municipal solid waste and as adequate access control and operational control was exercised by the city, no hazardous waste problem is anticipated.

4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark 'X')	C. ALLEGED INCIDENT (mark 'X')	D. DATE OF INCIDENT (mo., day, yr.)	E. REMARKS
1. NO HAZARD	XXXX			
2. HUMAN HEALTH				
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY				
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER				
8. CONTAMINATION OF SURFACE WATER				
9. DAMAGE TO FLORA/FAUNA				
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL				
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER (specify):				

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

NONE

☐ 1. NPDES PERMIT ☐ 2. SPCC PLAN ☐ 3. STATE PERMIT (specify) _____

☐ 4. AIR PERMITS ☐ 5. LOCAL PERMIT ☐ 6. RCRA TRANSPORTER

☐ 7. RCRA STORER ☐ 8. RCRA TREATER ☐ 9. RCRA DISPOSER

☐ 10. OTHER (specify) _____

B. IN COMPLIANCE?

☒ 1. YES ☐ 2. NO ☐ 3. UNKNOWN

4. WITH RESPECT TO (list regulation name & number): _____

VIII. PAST REGULATORY ACTIONS

☒ A. NONE ☐ B. YES (summarize below)

IX. INSPECTION ACTIVITY (past or on-going)

☒ A. NONE ☐ B. YES (complete items 1, 2, 3, & 4 below)

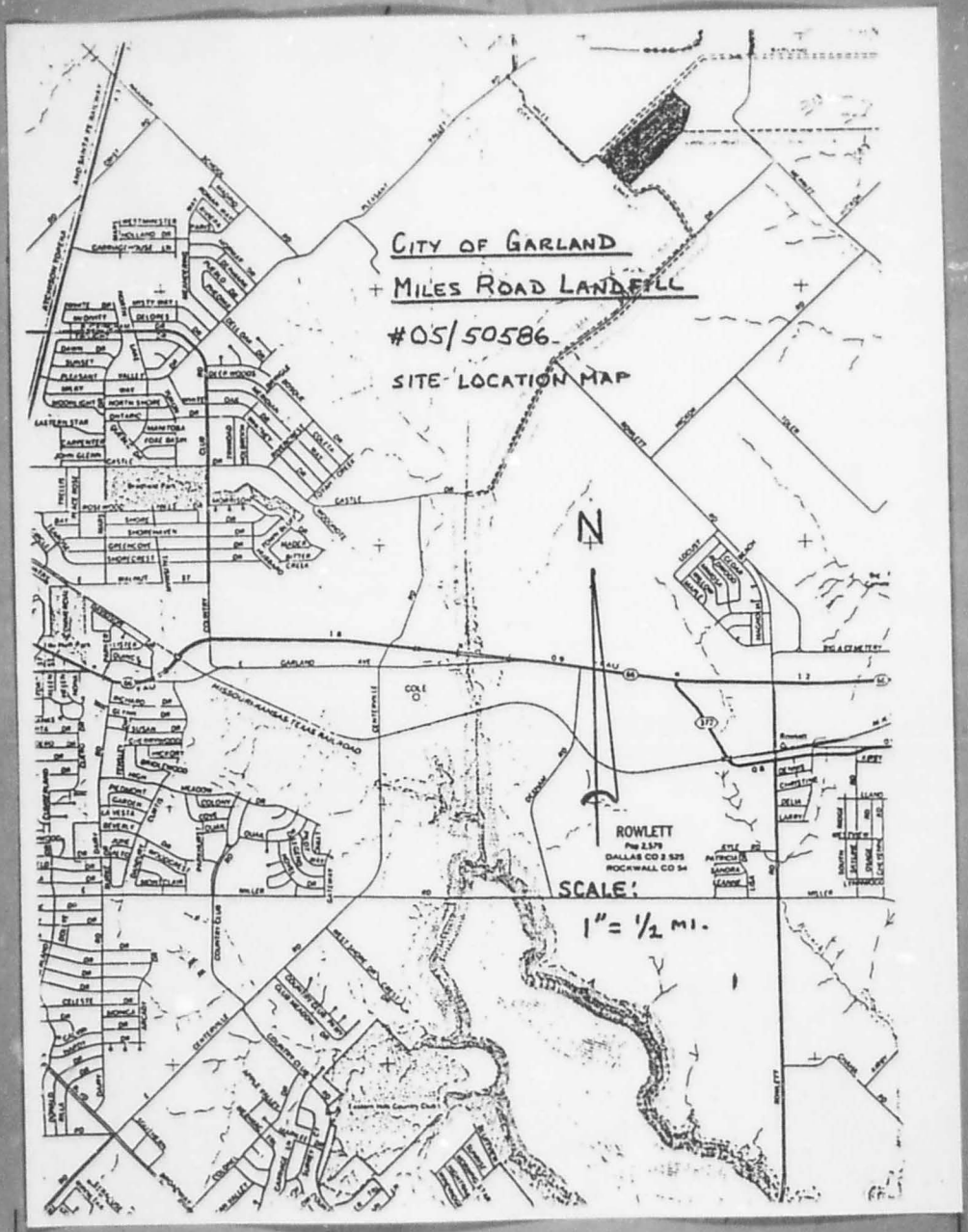
1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

X. REMEDIAL ACTIVITY (past or on-going)

☒ A. NONE ☐ B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment (Section II) information on the first page of this form.


CITY OF GARLAND
+ MILES ROAD LANDFILL
#05/50586-
SITE LOCATION MAP
N
ROWLETT
Pop 2,579
DALLAS CO 2 525
ROCKWALL CO 54
SCALE:
1" = 1/2 MI.

Reference 5
Record of Telephone Conversation between Tom Casabonne, Fluor Daniel, and Ken Smith, Landfill Director City of Garland Sanitation Department. March 16, 1993.

FLUOR DANIEL

RECORD OF TELEPHONE CONVERSATION

FROM: Tom Casabonne TJC
DATE: 3-16-93
LOCATION: Irvine, 552M
TIME: 14:25
TO: Ken Smith (214) 205-2713
P.O. NO.
LOCATION: Landfill Director, City of Garland
OTHER REF.

Mr. Smith gave me the following information on Garland landfills:

Miles Rd. - Owned by Vaughn McCallum (9214 Miles Rd., Rowlett, TX). The site is closed. It has a clay liner on the bottom and 3 ft. final cover on the surface, with no other controls. No sampling has been conducted and there have been no releases. It was last checked in November '92 (the city sanitation dept. checks the sites every 6 months). It is currently being used to graze sheep.

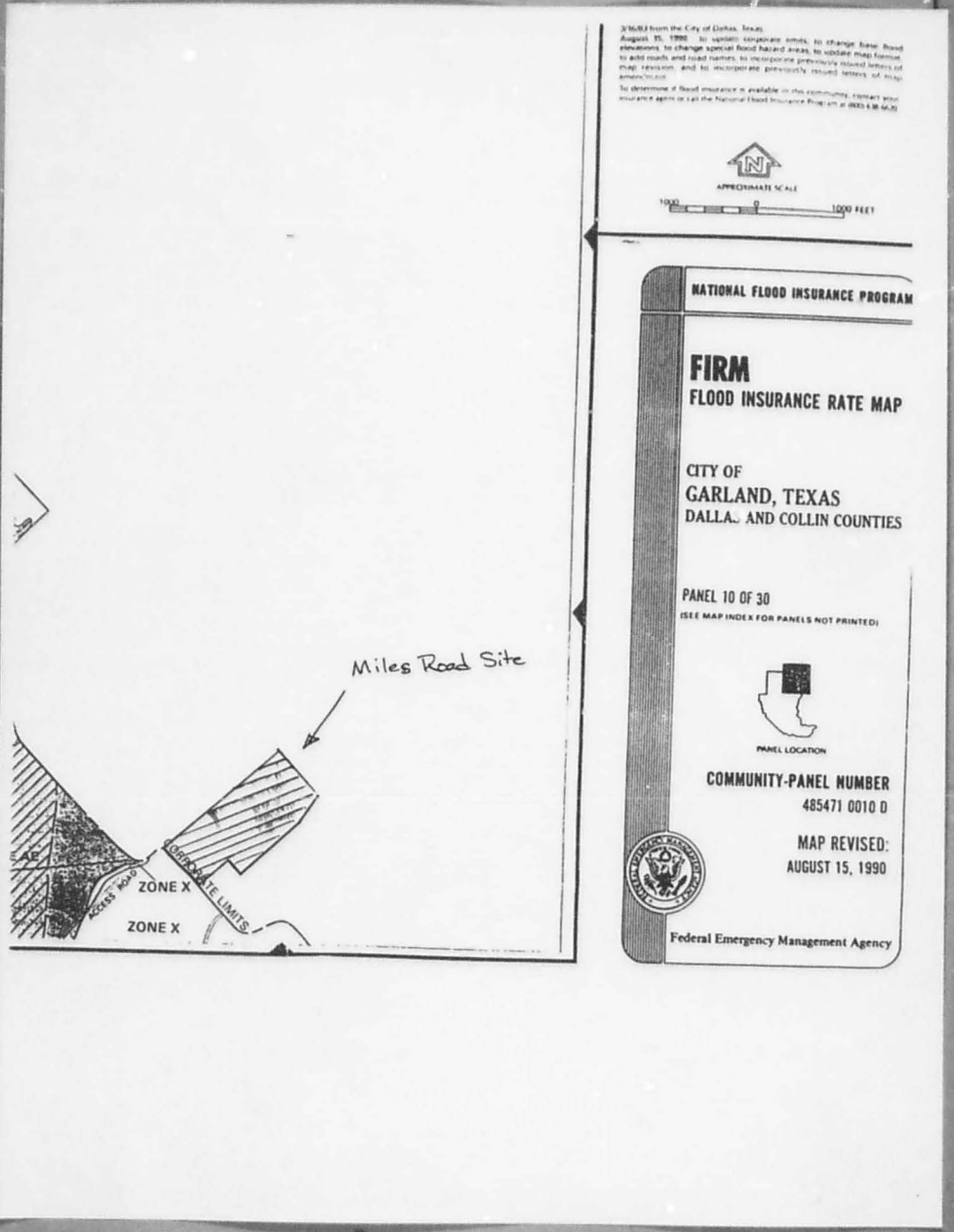
Castle Drive/Castle Miles - Operating under permit 1062A, issued 8-26-87. The original operating permit number for Castle Drive was 1026, issued on 9-19-77. It has a clay liner with 13 monitoring wells around the site. They check for methane around perimeter on an annual basis. Mr. Smith says that the site was enlarged by adding about 30 acres "on the inside of the L." Castle Miles operates under permit 1277, issued on 9-10-79. They plan to use this site until 1999. It is a municipal landfill, so they turn away liquids and hazardous materials.

East Garland Rd. - Eight to ten acres, operated under permit 05/50582 from May '70 to May '73. (That differs from our EPA file, which says May '70 to April '71, but Mr. Smith said he wouldn't argue with the EPA on this point. His dates of operation were also different on the Quail Creek and East Miller Rd. sites.) It was last inspected in November '92.

Quail Creek - Approximately 20 acres, operated from May '72 to May '73. (EPA file says May '72 to March '75.) His information lists two owners: Sunbelt Federal Savings (300 E. Carpenter Freeway, Irving, TX 75016) and Cambridge Consolidated (b) (6) [redacted] It was last inspected in November '92.

East Miller Rd. - Approximately 10 acres, operated from May '71 to May '72. (EPA file says July '71 to May '72.) Owners are Oleta M. Cannada (b) (6) [redacted] and Emma Drum (600 Main St., Garland, TX 75040).

Reference 9
Federal Emergency Management Agency, Flood Insurance
Rate Maps, Garland, Texas, Community-Panel Number
485471 0010 D, Map Revised Date August 15, 1990.


Miles Road Site
ZONE X
ACCESS ROAD
CORPORATE LIMITS
ZONE X
APPROXIMATE SCALE
1000 0 1000 FEET
NATIONAL FLOOD INSURANCE PROGRAM
FIRM
FLOOD INSURANCE RATE MAP
CITY OF
GARLAND, TEXAS
DALLAS AND COLLIN COUNTIES
PANEL 10 OF 30
(SEE MAP INDEX FOR PANELS NOT PRINTED)
PANEL LOCATION
COMMUNITY-PANEL NUMBER
485471 0010 D
MAP REVISED:
AUGUST 15, 1990
Federal Emergency Management Agency

F

LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

ZONE A — No base flood elevations determined.

ZONE AE — Base flood elevations determined.

ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.

ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE A99 — To be protected from 100-year flood by Federal flood protection system under construction; no base flood elevations determined.

ZONE V — Coastal flood with velocity hazard (wave action); no base flood elevations determined.

ZONE VE — Coastal flood with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

ZONE X — Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.

OTHER AREAS

ZONE X — Areas determined to be outside 500-year floodplain.

ZONE D — Areas in which flood hazards are undetermined.

UNDEVELOPED COASTAL BARRIERS

Floodplain Boundary

Floodway Boundary

Zone D Boundary

Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

513 — Base Flood Elevation Line; Elevation in Feet*

D — D — Cross Section Line

(EL 987) — Base Flood Elevation in Feet Where Uniform Within Zone*

RM 7X — Elevation Reference Mark

•M1.5 — River Mile

*Referenced to the National Geodetic Vertical Datum of 1929

Keys Are Identical

NOTES

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas. The community map repository should be consulted for possible updated flood hazard information prior to use of this map for property purchase or construction purposes.

Coastal base flood elevations apply only landward of 0.0 NGVD, and include the effects of wave action; these elevations may also differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

Areas of special flood hazard (100-year flood) include Zones A, AE, AH, AO, A99, V, and VE.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

This map is for use in administering the National Flood Insurance Program; it does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size, or all planimetric features outside Special Flood Hazard Areas. The community map repository should be consulted for possible updated flood hazard information prior to use of this map for property purchase or construction purposes.

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Certain areas not in Special Flood Hazard Areas may be protected by flood control structures.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the Federal Emergency Management Agency.

Floodway widths in some areas may be too narrow to show to scale. Floodway widths are provided in the Flood Insurance Study Report.

Elevation reference marks are described in the Flood Insurance Study Report.

For adjoining map panels see separately printed Map Index.

MAP REPOSITORY
City Hall, Garland, Texas 75046-9002 (Maps available for reference only, not for distribution).

INITIAL IDENTIFICATION:
APRIL 16, 1971

FLOOD HAZARD BOUNDARY MAP REVISIONS:
NONE

FLOOD INSURANCE RATE MAP EFFECTIVE:
APRIL 16, 1971

FLOOD INSURANCE RATE MAP REVISIONS:
July 1, 1974 - to change zone designations.
October 3, 1975 - reflect curvilinear flood boundary, to change corporate limits, and to add special flood hazard areas.
November 1, 1979 - to change zone designations, to change special flood hazard areas, to change base flood elevations.
March 15, 1984 - to change corporate limits, to add new special flood hazard areas, to reduce special flood hazard areas, to change zone designations, to change base flood elevations, to change zone boundary line designations, to add street names and to add streets, to add special flood hazard areas dated 12/4/79 from the City of Richardson, Texas and 3/16/83 from the City of Dallas, Texas.
August 15, 1990 - to update corporate limits, to change base flood elevations, to change special flood hazard areas, to update map format, to add roads and road names, to incorporate previously issued letters of map revision, and to incorporate previously issued letters of map amendment.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE
1000 0 1000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

Reference 21
Record of Telephone Conversation between Tom Casabonne, Fluor Daniel, and Rene Caraveo, Environmental Monitoring Manager, City of Dallas Water Utilities. June 7, 1993.

FLUOR DANIEL

RECORD OF TELEPHONE CONVERSATION

FROM: Tom Casabonne TJC — DATE: 6-7-93

LOCATION: Irvine, x6657 — TIME: 15:00

TO: Rene Caraveo, Envtl. Monit. Mgr. — P.O. NO.

LOCATION: Dallas, TX, (214) 670-0936 — OTHER REF. Analysis

I had a couple of phone conversations with Mr. Caraveo today to follow up on a conversation I had with Terry Hodgins on 5-27-93. He told me that Dallas is the only municipality that takes water out of Lake Ray Hubbard. Water from that intake is mixed with water from two other sources (including Lake Tawakoni) and blended to serve 1.6 million people in Dallas. The blend of the water from the three different intakes is constantly varied, so there is no fixed ratio of water drawn from the three sources.

Lake Ray Hubbard covers approximately 22,745 surface acres, and the entire watershed covers about 301 square miles.

I also spoke with Lindy Bond, who works with Rene Caraveo. When we are sampling on Dallas property (within the take line of Lake Ray Hubbard), Lindy wants us to split our samples so they can test them as well. In order to duplicate our tests, he would like us to send information on our analytes, limits, and methodologies. Lindy Bond's phone number is (214) 670-0936, and his fax number is (714) 670-8056. I told him that this would take a couple of days, and I will check on it again when I'm back in Irvine on Thursday, 6-10-93.

Analysis

Reference 24
U.S. Department of the Interior, Geologic Survey,
Professional Paper 574-D "Elemental Composition of Surficial
Materials in the Conterminous United States", H. T.
Shacklette et. al., 1971.

Elemental Composition of Surficial Materials in the Conterminous United States

By HANSFORD T. SHACKLETTE, J. C. HAMILTON, JOSEPHINE G. BOERNGEN, *and* JESSIE M. BOWLES

STATISTICAL STUDIES IN FIELD GEOCHEMISTRY

GEOLOGICAL SURVEY PROFESSIONAL PAPER 574-D

An account of the amounts of certain chemical elements in samples of soils and other regoliths

UNITED STATES GOVERNMENT PRINTING OFFICE, WASHINGTON : 1971

CONTENTS

ILLUSTRATIONS

TABLES

ELEMENTAL COMPOSITION OF SURFICIAL MATERIALS IN THE CONTERMINOUS UNITED STATES

By HANSFORD T. SHACKLETTE, J. C. HAMILTON, JOSEPHINE G. BOERNGEN, and JESSIE M. BOWLES

ABSTRACT

Samples of soils or other regoliths, taken at a depth of approximately 8 inches from locations about 50 miles apart throughout the conterminous United States, were analyzed for their content of elements. In this manner, 863 sample sites were chosen, and the results of the sample analyses for 35 elements were plotted on maps. The arithmetic and geometric mean, the geometric deviation, and a histogram showing frequencies of analytical values are given for 30 elements.

Surficial materials of the western half of the United States generally contain more calcium, magnesium, strontium, potassium, sodium, aluminum, and barium, but contain less titanium and zirconium than do those of the eastern half. Surficial materials in the Atlantic Coastal Plain tend to have much lower concentrations of most metals than are common in those of other regions, whereas these materials in the Basin and Range province, in parts of the Rocky Mountains, and in Maine and adjacent States generally have high total concentrations. Some smaller patterns of element abundance can be noted, but the degree of confidence in the validity of these patterns decreases as the patterns become more extensive.

INTRODUCTION

The abundances of certain chemical elements in soils and other surficial materials are determined not only by the element content of the bedrock or other deposits from which the materials originated, but also by the effects of climatic and biological factors that have acted on the materials for various periods of time. The diversity of these factors in a large area is expected to result in a corresponding diversity in the element contents of the surficial materials.

At the beginning of this study, few data were available on the abundance of the elements in surficial materials of the United States as a whole. Most of the early reports discussed only the elements that were of economic importance to mining or agriculture in a metallogenic area or State; and the data, for the most part, cannot be evaluated with reference to average, or "normal," amounts in undisturbed materials because they were based on samples of deposits expected to have anomalous amounts of certain elements, or were based only on samples from cultivated fields.

We began a sampling program in 1961 that was designed to give estimates of the range of element abundance in surficial materials that were unaltered or very little altered from their natural condition, and in plants that grew on these deposits, throughout the conterminous United States. Because of the great amount of travel necessary to complete this program, geologists and others of the U.S. Geological Survey were asked to assist by collecting samples when traveling to and from project areas and to contribute appropriate data that they might have collected for other purposes. The response to this request, together with the samples and data that we collected, resulted in obtaining samples of surficial materials and plants from 863 sites. The locations of these sites are shown on the maps of element distributions in this report.

The elemental compositions of only the surficial materials are given in this report; the data on analyses of the plant samples are held in files of the U.S. Geological Survey.

ACKNOWLEDGMENTS

This study was made possible by the cooperation of many persons in the U.S. Geological Survey. We thank Messrs. D. F. Davidson, A. T. Miesch, and A. T. Myers for their interest in, and continued support of, this study. The sampling plan was suggested by Mrs. Helen L. Cannon, who also contributed analytical data from her project areas and many samples from her travel routes. We thank also Messrs. E. V. Post and W. R. Griffitts for the large number of samples that they collected for this study. Others who collected samples, and to whom we express gratitude, follow: F. A. Branson, R. A. Cadigan, F. C. Canney, F. W. Cater, Jr., Todd Church, J. J. Connor, Dwight Crowder, J. A. Erdman, G. B. Gott, T. P. Hill, E. K. Jenne, J. R. Keith,

TABLE 1.—*Average contents, and range in contents, reported for elements in soils and other surficial materials*
[Data are in parts per million; each average represents arithmetic mean; ..... no data available]

Element	Present report		Hawkes and Webb (1962) (elements useful in geochemical prospecting)		Vinogradov (1959) (presumably, averages from world-wide sampling)	Jackson (1964)	Mitchell (1964)
	Average	Range	Average	Range		"Typical" average, or range in values	Range in content of Scottish surface soils
Al	66,000	700–>100,000	.....	.....	71,300	10,000–60,000	.....
B	34	<20–300	10	.....	10	30	.....
Ba	554	15–5,000	500	100–3,000	500	.....	400–3,000
Be	1	<1–7	6	.....	6	.....	<5–5
Ca	24,000	<150–320,000	.....	.....	13,700	7,000	.....
Ce	86	<150–300	.....	.....	50	.....	.....
Co	10	<3–70	8	1–40	8	.....	<2–80
Cr	53	1–1,500	200	5–1,000	200	.....	5–3,000
Cu	25	<1–300	20	2–100	20	.....	<10–100
Fe	25,000	100–>100,000	.....	14,000–40,000	38,000	7,000–42,000	.....
Ga	19	<5–70	.....	.....	30	.....	15–70
K	23,000	50–70,000	.....	.....	13,600	400–28,000	.....
La	41	<30–200	40	.....	40	.....	<30–200
Mg	9,200	50–100,000	.....	.....	6,300	<6,000	.....
Mo	.....	<3–7	2	0.2–5	2	1–10	<1–5
Mn	560	<1–7,000	850	200–3,000	850	.....	200–5,000
Na	12,000	<500–100,000	.....	.....	6,300	.....	.....
Nb	13	<10–100	.....	.....	.....	.....	.....
Nd	45	<70–300	.....	.....	.....	.....	.....
Ni	20	<5–700	40	5–500	40	.....	10–800
P	420	20–6,000	.....	.....	800	500	.....
Pb	20	<10–700	10	2–200	10	.....	<20–80
Sc	10	<5–50	.....	.....	7	.....	<3–15
Sr	240	<5–3,000	.....	.....	300	.....	60–700
Ti	3,000	300–15,000	4,600	1,000–10,000	4,600	1,200–6,000	.....
V	76	<7–500	100	20–500	100	.....	20–250
Y	29	<10–200	.....	.....	50	.....	25–100
Yb	4	<1–50	.....	.....	.....	.....	.....
Zn	54	<25–2,000	50	10–300	50	.....	.....
Zr	240	<10–2,000	.....	.....	300	.....	200–>1,000

of time and funds available—and its variance from an ideal plan has been recognized from the beginning. Because the collection of most samples was, by necessity, incidental to other duties of the samplers, the instructions for sampling were simplified as much as possible, so that sampling methods would be consistent within the wide range in kinds of sites to be sampled. The samples, other than those from certain project areas, were collected by U.S. Geological Survey personnel along their routes of travel to areas of other types of field studies.

The locations of the routes that were sampled depended on both the network of roads that existed and the destinations of the samplers. Sampling intensity

TABLE 3.—*Geometric mean compositions, and geometric deviations, of samples of soils and other surficial materials in the conterminous United States*

[Geometric means reported in parts per million. Too few molybdenum values were available to make a statistical evaluation]

Element	The conterminous United States N = 863		Western United States (west of 97th meridian) N = 492		Eastern United States (east of 97th meridian) N = 371	
	Geometric mean	Geometric deviation	Geometric mean	Geometric deviation	Geometric mean	Geometric deviation
Al	45,000	2.41	54,000	2.02	33,000	2.70
B	26	2.05	22	2.09	32	1.92
Ba	430	2.06	560	1.80	300	2.19
Be	0.6	2.49	0.6	2.47	0.6	2.53
Ca	8,800	3.92	18,000	2.93	3,200	2.87
Ce	75	1.67	74	1.64	78	1.70
Cr	7	2.21	8	2.01	7	2.55
Cu	37	2.32	38	2.16	36	2.52
Fe	18	2.28	21	2.00	14	2.54
	18,000	2.30	20,000	1.90	15,000	2.76
Ga	14	2.11	18	1.71	10	2.53
K	12,000	2.71	17,000	1.60	7,400	3.56
Mg	34	1.85	35	1.81	33	1.90
Mn	4,700	3.19	7,800	2.21	2,300	3.39
	340	2.70	389	1.94	285	3.65
Na	4,000	4.11	10,200	1.98	2,600	4.11
Nb	12	1.66	11	1.74	13	1.54
Nd	39	1.72	36	1.81	44	1.61
Ni	14	2.26	16	2.03	13	2.60
	250	2.74	320	2.33	180	3.03
P	16	1.96	18	1.93	14	1.96
Pb	8	1.79	9	1.74	7	1.85
Sc	120	3.39	210	2.12	51	3.56
Si	2,500	1.87	2,100	1.82	3,000	1.84
	56	2.16	66	1.91	46	2.41
Sr	24	1.77	25	1.66	23	1.93
Th	3	1.81	3	1.67	3	2.03
Ti	44	1.86	51	1.78	36	1.89
V	200	1.90	170	1.78	250	1.95

ics which form the patterns are the result of ance.

Some small- and intermediate-scale features of ment-abundance patterns are known to reflect ological characteristics of the areas that the soils rlie. A few soil samples with high phosphorous tent, for example, are associated with phosphate osits in Florida, and a single sample with high per content from the Upper Peninsula of Michi- is known to be of soil that occurs over a copper osit. Samples from most of the regoliths overlying ic volcanic rocks of Washington and Oregon con- ed higher than average concentrations of iron of a few other elements.

hese data do not provide consistent evidence of th-south trends in elemental compositions that ht be expected to relate to differences in tempera- regimes under which the surficial materials eloped. There is, moreover, no evidence of signifi- differences in element abundances between iated and nonglaciated areas (the general area of continental glaciation includes the northern tier of States from Montana to Maine and south in places to about lat 40° N.).

The world averages of abundance for some elements in soils, as given by Vinogradov (1959) and by others (table 1), do not correspond to the averages of abudance for those elements in soils of the United States, according to the data presented in this report. The world averages are too low for the amounts of boron, calcium, cerium, lead, magnesium, potassium, and sodium in United States soils, and too high for beryllium, chromium, gallium, manganese, nickel, phosphorus, titanium, vanadium, and yttrium. This report presents, for the first time, averages of the abundance of niobium, neodymium, and yttrium in soils.

REFERENCES CITED

Bear, F. E., ed., 1964, Chemistry of the soil [2d ed.]: New York, Reinhold Publishing Corp., 515 p.

Cannon, H. L., and Bowles, J. M., 1962, Contamination of

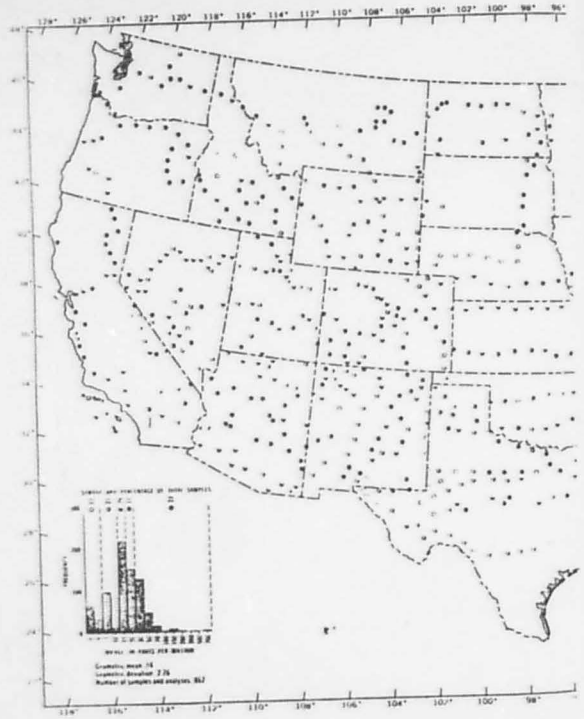

FIGURE 19.—Nickel content of surficial materials.

Reference 25
Inorganic Soil Data Validation Package for Miller Road
Landfill, October 27, 1993.

DATA QUALITY ASSURANCE REVIEW

Site Name:	Miller Road Landfill
Site Code:	TXD980750590
Case Number:	20355
Laboratory:	CompuChem Laboratories, Research Triangle Park, NC
Soil Samples:	MFBT19, MFBT20, MFBT21, MFBT22, MFBT23, MFBT24, MFBT25, MFBT25D, MFBT26, MFBT27, MFBT28, MFBT29, MFBT30, MFBT31, MFBT32, MFBT33, MFBT34,

The data package consists of 17 soil samples analyzed for TCL metals and cyanide. One sample was a laboratory duplicate.

1. Analytical Parameters: All samples were analyzed using multi-media, low concentration protocols.

2. Holding Times: All sample preparation and analysis were conducted within holding time limits.

3. Calibration Verification: All initial calibration verification results were within control limits.

   All continuing calibration verifications were conducted at the proper frequency. All results except beryllium met quality control criteria. (see Blanks)

4. Blanks: The CCB for beryllium exceeded the IDL. All detected beryllium concentrations are flagged (B) because the analyte concentrations were < 5X CCB.

   All other blanks met quality control criteria or did not affect the sample data.

5. Matrix Spike Recovery: The spike recovery for lead <30% so all lead concentrations are flagged (J). Its sample concentration >IDL. The manganese spike recovery >125%. The sample concentration >IDL. All analyte concentrations are flagged (J).

   The spike recovery for selenium was miscalculated. It is listed as 57.2%. The correct value is 27.2%. The %R <30% and the IDL > sample concentration. The analyte concentration in sample MFBT22 is flagged (R).

6. Duplicates: All laboratory duplicates met quality control criteria. MFBT26 is a field duplicate of MFBT25.

   All analytes meet quality control criteria.

7. Laboratory Control Samples: Quality control criteria were met in all samples.

8. ICP Interference Check Sample (ICS): ICP interference check samples were analyzed at the specified frequency and the results were within control limits.

9. ICP Serial Dilution: Quality control criteria were met in all samples.

10. Furnace AA: All sample results were within control limits.

11. Sample Result Verification: The inventory sheet lists "Mercury Raw Data" from pp. 203-231. Actual mercury raw data is from pp. 203-213. Cyanide data is listed as "NA". The cyanide data exists on pp. 214-231.

    No pages were missing, nor were any others mislabelled.

12. Overall Assessment of Data: The data package is acceptable with the following exceptions:

    a. One selenium concentration is rejected due to matrix spike recovery being too low.

    b. Beryllium data is subject to blank interference and flagged (B).

    c. Manganese and Lead are flagged (J) due to low matrix spike recovery.

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27-Oct-93

CHEMICAL DATA SUMMARY

Site Name and Code: Miller Road Landfill, TXD980750590
Case Number: 20355
Concentrations in milligrams/kilogram (mg/kg)
Compiled by: Fluor Daniel, Inc.

Traffic Number:	MFBT19		MFBT20		MFBT21		MFBT22		MFBT23		MFBT24		MFBT25		
Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		
Percent Solids:	76.0		88.0		84.3		92.0		92.9		82.4		78.4		
Location: and or Sample Description:	STA-01		STA-02		STA-03		STA-04		STA-05		STA-06		STA-07		
COMPOUND NAME	**CAS NO.**	**CLASS**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**
ALUMINUM	7429-90-5	INO	6,370.0		22,200.0		18,200.0		32,100.0		22,200.0		19,500.0		25,500.0	
ANTIMONY	7440-36-0	INO														
ARSENIC	7440-38-2	INO	4.7		4.2		4.9		4.0	U	5.4		5.0		4.9	
BARIUM	7440-39-3	INO	54.4		210.0		165.0		137.0		143.0		69.1		139.0	
BERYLLIUM	7440-41-7	INO	1.0	U	1.0	U	1.0	U	1.2	B	1.1	B	1.0	U	1.1	B
CADMIUM	7440-43-9	INO														
CALCIUM	7440-70-2	INO	68,500.0		82,300.0		106,000.0		90,200.0		128,000.0		69,200.0		109,000.0	
CHROMIUM	7440-47-3	INO	10.0		20.7		20.2		35.1		25.4		26.4		25.6	
COBALT	7440-48-4	INO	9.0	U	9.0	U	10.1		11.2		10.1		9.0	U	9.0	U
COPPER	7440-50-8	INO	8.0		9.6		10.4		11.9		14.6		13.0		11.8	
IRON	7439-89-6	INO	10,700.0		15,100.0		15,400.0		22,800.0		22,900.0		20,300.0		18,000.0	
LEAD	7439-92-1	INO	7.1	J	14.4	J	11.2	J	18.5	J	19.6	J	16.6	J	13.2	J
MAGNESIUM	7439-95-4	INO	1,620.0		3,940.0		3,440.0		7,360.0		7,890.0		6,620.0		4,900.0	
MANGANESE	7439-96-5	INO	319.0	J	434.0	J	355.0	J	283.0	J	394.0	J	175.0	J	338.0	J
MERCURY	7439-97-6	INO														
NICKEL	7440-02-0	INO	18.0	U	18.0	U	18.0	U	20.5		21.1		18.9		18.0	U
POTASSIUM	7440-09-7	INO	927.0		1,920.0		1,870.0		3,320.0		3,870.0		2,600.0		2,740.0	
SELENIUM	7782-49-2	INO							3.5	R						
SILVER	7440-22-4	INO														
SODIUM	7440-23-5	INO	286.0		210.0		256.0		318.0		1,400.0		235.0		194.0	
THALLIUM	7440-28-0	INO														
VANADIUM	7440-62-2	INO	19.1		37.8		42.5		57.7		44.9		36.1		48.7	
ZINC	7440-66-6	INO	29.4		57.9		73.6		89.6		78.0		73.0		53.0	
CYANIDE		INO	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

LEGEND
INO – Inorganic
B – Blank Interference
J – The associated value is an estimated quantity.
R – Data for analyte is unusable.
U – The material was analyzed for but was not detected above the level of the associated value.
UJ – The material was analyzed for but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

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CHEMICAL DATA SUMMARY

Site Name and Code: Miller Road Landfill, TXD980750590
Case Number: 20355
Concentrations in milligrams/kilogram (mg/kg)
Compiled by: Fluor Daniel, Inc.

Traffic Number:	MFBT25D	MFBT34	MFBT26	MFBT27	MFBT28	MFBT29	MFBT30
Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Percent Solids:	78.4	82.4	80.4	74.0	92.0	87.3	86.0
Location:	STA-07	STA-16	STA-08	STA-09	STA-10	STA-11	STA-12
and or Sample Description:	LABORATORY DUPLICATE		FIELD DUPLICATE				

COMPOUND NAME	CAS NO.	CLASS	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C
ALUMINUM	7429-90-5	INO	24,668.9		26,200.0		29,700.0		32,200.0		25,400.0		36,000.0		24,200.0	
ANTIMONY	7440-36-0	INO														
ARSENIC	7440-38-2	INO	4.0	U	4.3		4.0	U	5.8		4.0	U	5.7		6.0	
BARIUM	7440-39-3	INO	138.9		217.0		117.0		128.0		155.0		154.0		127.0	
BERYLLIUM	7440-41-7	INO	1.1	B	1.2	B	1.2	B	1.2	B	1.0	U	1.5	B	1.2	B
CADMIUM	7440-43-9	INO														
CALCIUM	7440-70-2	INO	116,183.7		54,200.0		111,000.0		121,000.0		44,800.0		76,600.0		88,200.0	
CHROMIUM	7440-47-3	INO	25.0		25.0		29.2		32.0		28.1		40.2		29.1	
COBALT	7440-48-4	INO	9.0	U	10.4		9.0	U	9.0	U	17.0		13.4		10.9	
COPPER	7440-50-8	INO	11.7		11.6		10.2		11.1		10.0		16.7		14.9	
IRON	7439-89-6	INO	18,104.1		18,000.0		18,400.0		20,100.0		17,900.0		26,600.0		23,000.0	
LEAD	7439-92-1	INO	16.0	J	196.0	J	12.7	J	22.0	J	13.3	J	24.3	J	18.4	J
MAGNESIUM	7439-95-4	INO	4,788.5		4,450.0		5,330.0		5,790.0		6,000.0		7,920.0		7,130.0	
MANGANESE	7439-96-5	INO	445.5	J	516.0	J	250.0	J	272.0	J	957.0	J	443.0	J	198.0	J
MERCURY	7439-97-6	INO														
NICKEL	7440-02-0	INO	21.0		18.0	U	19.4		18.0	U	24.0		25.7		22.5	
POTASSIUM	7440-09-7	INO	2,668.9		2,880.0		3,260.0		3,480.0		3,030.0		4,400.0		2,830.0	
SELENIUM	7782-49-2	INO														
SILVER	7440-22-4	INO														
SODIUM	7440-23-5	INO	206.9		152.0		216.0		249.0		750.0		290.0		257.0	
THALLIUM	7440-28-0	INO														
VANADIUM	7440-62-2	INO	47.4		51.5		50.5		54.2		48.1		86.8		44.8	
ZINC	7440-66-6	INO	59.9		168.0		51.0		66.8		55.2		93.6		60.4	
CYANIDE		INO	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

LEGEND
INO – Inorganic
B – Blank interference
J – The associated value is an estimated quantity.
R – Data for analyte is unusable.
U – The material was analyzed for but was not detected above the level of the associated value.
UJ – The material was analyzed for but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

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CHEMICAL DATA SUMMARY

Site Name and Code: Miller Road Landfill, TXD980750590
Case Number: 20355
Concentrations in milligrams/kilogram (mg/kg)
Compiled by: Fluor Daniel, Inc.

Traffic Number:	MFBT31		MFBT32		MFBT33										
Matrix:	SOIL		SOIL		SOIL										
Percent Solids:	64.7		58.8		52.0										
Location:	STA-13		STA-14		STA-15										
and or Sample Description:															

COMPOUND NAME	CAS NO.	CLASS	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C	Concentration	C
ALUMINUM	7429-90-5	INO	29,000.0		53,400.0		28,500.0									
ANTIMONY	7440-36-0	INO														
ARSENIC	7440-38-2	INO	5.9		7.7		4.6									
BARIUM	7440-39-3	INO	146.0		141.0		137.0									
BERYLLIUM	7440-41-7	INO	1.4	B	1.5	B	1.3	B								
CADMIUM	7440-43-9	INO														
CALCIUM	7440-70-2	INO	95,000.0		70,200.0		56,500.0									
CHROMIUM	7440-47-3	INO	34.3		39.9		32.6									
COBALT	7440-48-4	INO	9.6		11.3		9.0	U								
COPPER	7440-50-8	INO	17.2		16.6		16.4									
IRON	7439-89-6	INO	27,000.0		26,400.0		19,800.0									
LEAD	7439-92-1	INO	23.7	J	25.0	J	22.9	J								
MAGNESIUM	7439-95-4	INO	7,350.0		7,410.0		5,810.0									
MANGANESE	7439-96-5	INO	269.0	J	266.0	J	217.0	J								
MERCURY	7439-97-6	INO														
NICKEL	7440-02-0	INO	24.7		20.7		19.0									
POTASSIUM	7440-09-7	INO	3,360.0		4,240.0		3,020.0									
SELENIUM	7782-49-2	INO														
SILVER	7440-22-4	INO														
SODIUM	7440-23-5	INO	253.0		280.0		599.0									
THALLIUM	7440-28-0	INO														
VANADIUM	7440-62-2	INO	53.8		51.9		54.7									
ZINC	7440-66-6	INO	87.5		87.6		73.4									
CYANIDE		INO	10.0	U	10.0	U	10.0	U								

LEGEND
INO – Inorganic
B – Blank Interference
J – The associated value is an estimated quantity.
R – Data for analyte is unusable.
U – The material was analyzed for but was not detected above the level of the associated value.
UJ – The material was analyzed for but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

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Reference 26
Inorganic Soil Data Validation Package for Castle Drive and
Miles Road Landfill, October 28, 1993.

DATA QUALITY ASSURANCE REVIEW

Site Name: Castle Miles Landfill
Site Code: TXD980750368
Case Number: 20267

Laboratory: American Analytical - Broken Arrow, OK

Scil Samples: MFAP79, MFAP80, MFAP81, MFAP82, MFAP83, MFAP84, MFAP85, MFAP86, MFAP87, MFAP88, MFAP89, MFAP81D

The data package consists of 12 soil samples analyzed for TCL metals and cyanide. One sample was a duplicate.

1. Analytical Parameters: All samples were analyzed using low concentration samples.

2. Holding Times: All sample preparation and analysis were conducted within holding time limits.

3. Calibration Verification: There is no indication that the cyanide standard was distilled. All cyanide data is flagged as (J). All initial calibration verification results were within control limits. All continuing calibration verifications were conducted at the proper frequency and the results were within control limits.

4. Blanks: All blanks were at the IDL except copper and silver

   The blank concentrations for copper were generally above the IDL. The highest value was 4.8 mg/l. All sample analyte concentrations were less than five times this concentration and, therefore, were flagged (B).

   The blank concentration for silver was above the IDL, but did not affect the results since all sample concentrations were below the IDL.

5. Matrix Spike Recovery: The spike recovery (%R) was miscalculated for cyanide, mercury, and manganese. Corrections should be as follows:

ELEMENT/IONIC SPECIES	%R LISTED VALUE	TRUE VALUE
Hg	110.0	90.0
Mn	-363.5	-363.4
Cn	101.4	91.4

Spike recovery for barium and vanadium exceeded quality control limits. Analyte concentrations of these two elements are flagged (J).

All other matrix spikes were within quality control limits.

6. Duplicates: The relative percent difference for aluminum, iron, and manganese exceed the quality control limit of 35%. As such, analyte concentrations of these elements are flagged (J).

   The relative percent difference for all other elements meet the quality control criteria.

7. Laboratory Control Samples: Quality control criteria were met in all samples.

8. ICP Interference Check Sample (ICS): ICP interference check samples were analyzed at the specified frequency and the results were within control limits.

9. ICP Serial Dilution: Quality control criteria were met in all samples.

10. Furnace AA: Furnace Atomic Absorption Raw Data was not part of this validation package.

11. Sample Result Verification: Data package had no missing or incorrectly numbered pages.

12. Overall Assessment of Data: The data package is acceptable except for the following:

    a. Blank interference with copper analyte.
    b. Failure to dilute the mid-range cyanide standard.
    c. Duplicate relative difference for aluminum, iron and manganese being beyond control limits.
    d. Matrix Spike Recovery for barium and vanadium being beyond control limits.

28-Oct-93

CHEMICAL DATA SUMMARY

Site Name and Code: Castle Miles Landfill,TXD980750368
Case Number: 20267
Concentrations in milligrams/kilogram (mg/kg)
Compiled by: Fluor Daniel,Inc.

Traffic Number:	MFAP79		MFAP80		MFAP81		MFAP82		MFAP83		MFAP84		MFAP85	
Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
Percent Solids:	80.8		77.7		79.4		81.4		84.9		78.1		81.7	
Location:	SS-01		SS-02		SS-03		SS-04		SS-05		SS-06		SS-07	
and or Sample Description:														
COMPOUND NAME	**CAS NO.**	**CLASS**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**
ALUMINUM	7429-90-5	INO	27,600.00	J	32,900.00	J	32,600.00	J	15,900.00	J	9,100.00	J	10,200.00	J	22,400.00	J
ANTIMONY	7440-36-0	INO														
ARSENIC	7440-38-2	INO	3.60		5.00		6.80		4.00		4.40		4.70		4.60	
BARIUM	7440-39-3	INO	229.00	J	169.00	J	349.00	J	190.00	J	196.00	J	190.00	J	101.00	J
BERYLLIUM	7440-41-7	INO	1.10		1.10		1.20		1.00	U	1.00	U	1.00	U	1.00	U
CADMIUM	7440-43-9	INO														
CALCIUM	7140-70-2	INO	7,750.00		144,000.00		73,800.00		78,700.00		97,100.00		85,500.00		91,100.00	
CHROMIUM	7440-47-3	INO	22.10		33.10		28.90		15.10		8.20		9.70		20.50	
COBALT	7440-48-4	INO	8.20		6.40		15.80		6.00		10.70		7.30		5.00	U
COPPER	7440-50-8	INO	17.50	B	17.00	B	19.80	B	12.10	B	7.90	B	12.10	B	11.10	B
IRON	7439-89-6	INO	16,600.00	J	20,100.00	J	21,800.00	J	12,600.00	J	8,250.00	J	10,100.00	J	16,200.00	J
LEAD	7439-92-1	INO	19.70		21.50		26.70		18.80		14.70		17.90		12.70	
MAGNESIUM	7439-95-4	INO	2,950.00		4,880.00		3,880.00		2,520.00		1,650.00		2,270.00		3,620.00	
MANGANESE	7439-96-5	INO	515.00	J	605.00	J	1,030.00	J	522.00	J	681.00	J	643.00	J	376.00	J
MERCURY	7439-97-6	INO														
NICKEL	7440-02-0	INO	21.00	U	21.20		30.30		21.00	U	21.00	U	21.00	U	21.00	U
POTASSIUM	7440-09-7	INO	1,150.00		3,690.00		2,360.00		1,320.00		1,010.00		1,150.00		2,200.00	
SELENIUM	7782-49-2	INO														
SILVER	7440-22-4	INO														
SODIUM	7440-23-5	INO	183.00	U	445.00		402.00		359.00		219.00		264.00		396.00	
THALLIUM	7440-28-0	INO														
VANADIUM	7440-62-2	INO	34.30	J	55.40	J	61.40	J	32.40	J	25.50	J	29.60	J	41.90	J
ZINC	7440-66-6	INO	38.20		75.50		54.40		37.60		30.10		38.00		50.5	
CYANIDE		INO	10.00	U	10.00	U	10.00	U	10.00	U	10.00	U	10.00	U	10.00	U

LEGEND
INO – Inorganic
B – Blank Interference.Analyte conc. < 5x blank conc.
J – The associated value is an estimated quantity.
R – Date for analyte is unusable.
U – The material was analyzed for but was not detected above the level of the associated value.
UJ – The material was analyzed for but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

B:\CASTLEMI.WK3

CHEMICAL DATA SUMMARY

Site Name and Code: Castle Miles Landfill,TXD980750368
Case Number: 20267
Concentrations in milligrams/kilogram (mg/kg)
Compiled by: Fluor Daniel,Inc.

Traffic Number:	MFAP86			MFAP87			MFAP88			MFAP89			MFAP81D								
Matrix:	SOIL			SOIL			SOIL			SOIL			SOIL								
Percent Solids:	80.5			73.5			80.2			82.1			79.4								
Location:	SS-08			SS-09			SS-10			SS-11			SS-03								
and or																					
Sample Description:							BACKGROUND			BACKGROUND			DUPLICATE								
COMPOUND NAME	**CAS NO.**	**CLASS**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**	**Concentration**	**C**			
ALUMINUM	7429-90-5	INO	33,900.00	J	38,600.00	J	28,500.00	J	36,800.00	J	14,794.81	J						J			
ANTIMONY	7440-36-0	INO					19.00	U	19.00	U											
ARSENIC	7440-38-2	INO	4.30		4.80		3.00	U	3.40		4.30										
BARIUM	7440-39-3	INO	200.00	J	321.00	J	203.00	J	302.00	J	221.82	J									
BERYLLIUM	7440-41-7	INO	1.00	U	1.30		1.00	U	1.20		1.00	U									
CADMIUM	7440-43-9	INO					2.00	U	2.00	U											
CALCIUM	7440-70-2	INO	90,600.00		30,400		5,740.00		6,140.00		56,755.62										
CHROMIUM	7440-47-3	INO	28.20		32.60		21.90		29.00		13.37										
COBALT	7440-48-4	INO	7.80		17.90		5.00	U	14.20		6.81										
COPPER	7440-50-8	INO	10.90	B	13.30	B	9.90	B	11.30	B	14.42	B									
IRON	7439-89-6	INO	18,100.00	J	21,700.00	J	15,700.00	J	19,400.00	J	11,539.74	J									
LEAD	7439-92-1	INO	16.00		23.60		14.30		21.80		20.07										
MAGNESIUM	7439-95-4	INO	4,440.00		4,890.00		2,470.00		2,950.00		2,228.06										
MANGANESE	7439-96-5	INO	736.00	J	1,670.00	J	187.00	J	710.00	J	550.19	J									
MERCURY	7439-97-6	INO					0.20	U	0.20	U											
NICKEL	7440-02-0	INO	21.00	U	26.40		21.00	U	21.00	U	21.00	U									
POTASSIUM	7440-09-7	INO	2,640.00		2,970.00		1,140.00		1,770.00		1,202.54										
SELENIUM	7782-49-2	INO					4.00	U	4.00	U											
SILVER	7440-22-4	INO					3.00	U	3.00	U											
SODIUM	7440-23-5	INO	255.00		183.00		284.00		273.00		361.59										
THALLIUM	7440-28-0	INO					7.00	U	7.00	U											
VANADIUM	7440-62-2	INO	57.00	J	66.80	J	30.50	J	50.30	J	32.49	J									
ZINC	7440-66-6	INO	46.8		54.00		36.00		43.00		34.71										
CYANIDE		INO	10.00	U	10.00	U	10.00	U	10.00	U	10.00	U									

LEGEND
INO – Inorganic
B – Blank interference.Analyte conc. < 5x blank conc.
J – The associated value is an estimated quantity.
R – Date for analyte is unusable.
U – The material was analyzed for but was not detected above the level of the associated value.
UJ – The material was analyzed for but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

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Reference 27
Inorganic Soil Data Validation Package for East Garland Road
Landfill, October 6, 1993.

INORGANIC
DATA QUALITY ASSURANCE REVIEW

Site Name:	East Garland Road LF
Site Code: Case Number:	20354
Laboratory:	Associated Laboratories -- Orange Ca.
Soil Samples:	MFBT00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, & 18.

The data package consisted of Eighteen soil samples analyzed for total metals and cyanide.

1. Analytical Parameters: All samples were analyzed using low concentration methods.

2. Holding Times: Holding time limits were reported as not having been exceeded.

3. Calibration Verification: All initial calibration verification results were within control limits. All continuing calibration verifications were reported to be within control limits.

4. CRDL Standards: the following parameters were out of compliance due to CRDL criteria - copper(159.2), mercury(150). Results in the affected range are estimated.

5. Blanks: calibration and prep blank results associated to a particular group of samples are used to qualify data. Trip blanks are used to qualify only those samples with which they were shipped and are not required for non-aqueous matrices. Typically, if sample concentration is greater than five times a blank value that is not considered a common lab artifact, no qualification is needed. If sample concentration is greater than ten times a blank value and is considered a common lab artifact, no qualification is needed. If the reported value is less than stated above, qualifications are applied in accordance with guidance. No field blank/trip blank/rinsate blank/ were reported to be associated with this SDG. Lab blanks as follows were reported as containing contamination greater than the IDL, but less than the CRDL: calcium, copper, iron, magnesium, potassium sodium, and vanadium. Affected samples were qualified as per guidance.

6. Matrix Spike Recoveries: Antimony, arsenic, copper, selenium and thallium were flagged by the lab with an "N" qualifier due to %R out of control limits. The data reviewer flagged these data "j", estimated. Antimony and arsenic results were qualified as unusable by a previous data reviewer. However, the SR concentration was qualified "u" (for antimony) and B for the SSR and SR(for arsenic), and therefore the results should be estimated, not rejected.

7. Duplicates: Laboratory duplicates were flagged with "*" by the lab indicating the RPD was out of control limits. The following data were reportedly affected: arsenic, copper, & selenium. Affected data were qualified "j". Field duplicates were identified as MFBT00 & 01. No gross variations were noted between field duplicate pairs.

8. Laboratory Control Samples: Barium(45.8), potassium(0), & Sodium(181) were reported as out of control limits. Qualifications as per guidance was performed.

9. ICP Interference Check Sample (ICS): ICS results were within control limits.

10. ICP Serial Dilution: the lab qualified aluminum(%D-11.8), barium(%D-12.9), calcium(%D-17.2), iron(%D-23.9), magnesium(%D-13.2), manganese(%D-20.2) with an E qualifier. This qualifier was changed to J.

11. Overall Assessment: Some laboratory duplicate results were out of control limits. Blank concentrations were above the IDL for some analytes. Furnace atomic absorption spike recoveries were outside of control limits for thallium. MSA analysis was not performed as required for arsenic on 10 samples. Matrix spike duplicates, and ICP serial dilutions were out of control limits for some analytes. Other technical requirements appear to have been met.

06-Oct-93

INORGANIC CHEMICAL DATA SUMMARY

Site Name and Code: East Garland Landfill
Case Number: 20354
Concentrations: In milligrams per kilogram (mg/kg)
Compiled by: Fluor Daniel

Inorganic Traffic No.																			
Sample I.D.	MFBT00		MFBT01		MFBT02		MFBT03		MFBT04		MFBT05		MFBT06						
Matrix	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL						
Percent Solids	86.4		86.4		88.9		85.9		84.8		70.2		83.2						
Location and/or Sample Description	STA-01		STA-02		STA-03		STA-04		STA-05		STA-06		STA-07						
COMPOUND NAME	CAS NO.	CLASS	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	
ALUMINUM	7429-90-5	INO	19300	J	18700	J	25800	J	19800	J	22500	J	22200	J	21900	J			
ANTIMONY	7440-36-0	INO	11.3	U	11.3	U	10.6	U	10.8	U	10.8	U	13.5	U	11.4	U			
ARSENIC	7440-38-2	INO	7.4	J	6.1	J	4.6	U	4.8	U	5.1	U	6	U	4.9	U			
BARIUM	7440-39-3	INO	109	J	93.6	J	118	J	117	J	108	J	142	J	134	J			
BERYLLIUM	7440-41-7	INO	1.2		1.4		1.5		1.3		1.5		1.2		1.2				
CADMIUM	7440-43-9	INO	0.65	U	0.65	U	0.61	U	0.62	U	0.62	U	0.77	U	0.65	U			
CALCIUM	7440-70-2	INO	162000	J	192000	J	144000	J	155000	J	91500	J	138000	J	175000	J			
CHROMIUM	7440-47-3	INO	18.8		18.5		24		18.1		24		21.8		19.7				
COBALT	7440-48-4	INO	8.7		9.2		7.1		8.3		9		11		7.2				
COPPER	7440-50-8	INO	26.3	J	12.2	J	12.2	J	11.6	J	12.5	J	12.8	J	10	J			
IRON	7439-89-6	INO	16100	J	17400	J	15700	J	15000	J	18400	J	16500	J	13700	J			
LEAD	7439-92-1	INO	38.3		39.8		36.2		37.4		37.3		41.3		34.3				
MAGNESIUM	7439-95-4	INO	3420	J	3490	J	4260	J	3450	J	4300	J	3820	J	3620	J			
MANGANESE	7439-96-5	INO	572	J	639	J	601	J	621	J	363	J	593	J	664	J			
MERCURY	7439-97-6	INO	0.08	U	0.09	J	0.08	U	0.09	U	0.09	U	0.11	U	0.1	U			
NICKEL	7440-02-0	INO	17.6		20.8		16		15.4		18.2		21.4		14.3				
POTASSIUM	7440-09-7	INO	2500		2240		2680		2310		3100		2450		2340				
SELENIUM	7782-49-2	INO	3.4	UJ	2.3	J	3.1	UJ	3.3	UJ	3.5	UJ	2.7	J	3.4	UJ			
SILVER	7440-22-4	INO	0.76	U	0.76	U	0.71		0.73	U	0.73	U	0.91	U	0.76	U			
SODIUM	7440-23-5	INO	262		271		173		212		219		233		169				
THALLIUM	7440-28-0	INO	0.36	UJ	0.36	UJ	0.33	UJ	0.35	UJ	0.37	UJ	0.43	UJ	0.36	UJ			
VANADIUM	7440-62-2	INO	45.6		50.6		48.9		41.9		44.3		48.8		42				
ZINC	7440-66-6	INO	58		52.6		66.8		52.8		64.5		61.4		45.3				
CYANIDE		INO	2.9	U	2.9	U	2.7	U	2.9	U	2.9	U	3.5	U	3	U			

LEGEND
INO -- Inorganic
Q -- Analytical results' Qualifier (listed below).
B -- Analyte was detected above the CRDL but below 5X Blank Concentration.
J -- The associated value is an estimated quantity.
R -- Data for analyte is unusable.
U -- The material was analyzed for but was not detected above the level of the associated value.
UJ -- The material was analyzed for but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

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06-Oct-93

INORGANIC CHEMICAL DATA SUMMARY

Site Name and Code: East Garland Landfill
Case Number: 20354
Concentrations: In milligrams per kilograms (mg/kg)
Compiled by: Fluor Daniel

Inorganic Traffic No.															
Sample I.D.	MFBT07		MFBT08		MFBT09		MFBT10		MFBT11		MFBT12		MFBT13		
Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		
Percent Solids	66		83		82.9		86.5		84.4		87.5		87.7		
Location: and or Sample Description:	STA-08		STA-09		STA-10		STA-11		STA-12		STA-13		STA-14		
COMPOUND NAME	**CAS NO.**	**CLASS**	**Concentration**	**Q**	**Concentration**	**Q**	**Concentration**	**Q**	**Concentration**	**Q**	**Concentration**	**Q**	**Concentration**	**Q**	**Concentration**	**Q**
ALUMINUM	7429-90-5	INO	14300	J	16200	J	27700	J	23900	J	25800	J	22500	J	13200	J
ANTIMONY	7440-36-0	INO	15.2	U	11.8	U	11.2	U	11.2	U	11	U	11.5	U	10.8	U
ARSENIC	7440-38-2	INO	6.5	U	6.5	J	6.3	J	4.7	U	5.2	U	7.3	J	5	U
BARIUM	7440-39-3	INO	151	J	140	J	212	J	142	J	116	J	145	J	79.8	J
BERYLLIUM	7440-41-7	INO	0.83		1.3		1.4		1.2		1.3		1.3		0.75	
CADMIUM	7440-43-9	INO	0.87	U	0.66	U	15.2		5.3		2.9		5.6		0.62	U
CALCIUM	7440-70-2	INO	153000	J	168000	J	134000	J	161000	J	153000	J	132000	J	212000	J
CHROMIUM	7440-47-3	INO	16.2		14.4		159		60.9		34.9		60.7		15	
COBALT	7440-48-4	INO	8.3		3.9		7.1		5.9		8.3		8.7		6.4	
COPPER	7440-50-8	INO	15.7	J	10.4	J	152	J	62.7	J	30.9	J	71	J	8.8	J
IRON	7439-89-6	INO	11800	J	11600	J	17300	J	14600	J	17800	J	15000	J	11700	J
LEAD	7439-92-1	INO	13.8	J	67.8	J	105		53		48.5		61.4		36.3	
MAGNESIUM	7439-95-4	INO	2970	J	2920	J	3900	J	3780	J	4040	J	3440	J	2890	J
MANGANESE	7439-96-5	INO	564	J	678	J	556	J	562	J	619	J	635	J	805	J
MERCURY	7439-97-6	INO	0.11	U	0.74		0.79		0.47		0.14		0.24		0.08	U
NICKEL	7440-02-0	INO	16.6		14.8		22.2		17.4		17.2		22.9		16	
POTASSIUM	7440-09-7	INO	1630		1960		3150		2320		2670		2510		1260	
SELENIUM	7782-49-2	INO	0.59	J	3.5	UJ	3.5	UJ	3.2	UJ	3.5	UJ	3.2	UJ	0.34	J
SILVER	7440-22-4	INO	1	U	0.8	U	13.9		4.2		0.74	U	1.7		0.72	U
SODIUM	7440-23-5	INO	421		155		207		206		237		245		327	
THALLIUM	7440-28-0	INO	0.48	UJ	0.37	UJ	0.37	UJ	0.34	UJ	0.38	UJ	0.34	UJ	0.36	UJ
VANADIUM	7440-62-2	INO	33.3		34.9		49.4		48.8		52		47.7		37.2	
ZINC	7440-66-6	INO	60.2		39.9		365		143		94.3		161		36.5	
CYANIDE		INO	3.7	U	2.9	U	3	U	2.8	U	2.9	U	2.8	U	2.9	U

LEGEND
INO – Inorganic
Q – Analytical results' Qualifier (listed below).
B – Analyte was detected above the CRDL but below 5X Blank Concentration.
J – The associated value is an estimated quantity.
R – Data for analyte is unusable.
U – The material was analyzed for but was not detected above the level of the associated value.
UJ – The material was analyzed for but was not detected. The associated value is an estimate and may be inaccurate or imprecise.

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06-Oct-93

INORGANIC CHEMICAL DATA SUMMARY

Site Name and Code: East Garland Landfill
Case Number: 20354
Concentrations: In milligrams per kilogram (mg/kg)
Compiled by: Fluor Daniel

Inorganic Traffic No.																							
Sample I.D	MFBT14				MFBT15				MFBT16				MFBT18										
Matrix:	SOIL				SOIL				SOIL				SOIL										
Percent Solids	90.1				86.9				82.9				85.1										
Location and or Sample Description:	STA-15				STA-16				STA-17				STA-19										
COMPOUND NAME	CAS NO.	CLASS	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	Concentration	Q	
ALUMINUM	7429-90-5	INO	16700	J	30700	J	21400	J	28500	J													
ANTIMONY	7440-36-0	INO	10.7	U	10.8	U	11.5	U	11.7	U													
ARSENIC	7440-38-2	INO	4.8	U	4.7	U	5.8	J	9.2	J													
BARIUM	7440-39-3	INO	96.7	J	160	J	135	J	171	J													
BERYLLIUM	7440-41-7	INO	1.1		1.6		1.4		1.6														
CADMIUM	7440-43-9	INO	0.61	U	0.62	U	6.1		0.67	U													
CALCIUM	7440-70-2	INO	193000	J	126000	J	142000	J	82200	J													
CHROMIUM	7440-47-3	INO	16.3		25.4		50.6		27.5														
COBALT	7440-48-4	INO	8.1		5.2		10.3		11.6														
COPPER	7440-50-8	INO	9.7	J	9.8	J	78.4	J	15	J													
IRON	7439-89-6	INO	12900	J	17000	J	15700	J	19300	J													
LEAD	7439-92-1	INO	29.7		44.7		49.5		51.7														
MAGNESIUM	7439-95-4	INO	3090	J	3390	J	3590	J	4020	J													
MANGANESE	7439-96-5	INO	860	J	305	J	906	J	1080	J													
MERCURY	7439-97-6	INO	0.09	U	0.09	U	0.19		0.09	U													
NICKEL	7440-02-0	INO	16.9		16.5		24.2		21.9														
POTASSIUM	7440-09-7	INO	1580		1930		2180		3770														
SELENIUM	7782-49-2	INO	3.3	UJ	3.2	UJ	3.3	UJ	2.4	J													
SILVER	7440-22-4	INO	0.72	U	0.72	U	1.5		0.78	U													
SODIUM	7440-23-5	INO	319		139		197		133														
THALLIUM	7440-28-0	INO	0.35	UJ	0.34	UJ	0.35	UJ	0.34	UJ													
VANADIUM	7440-62-2	INO	42.4		48.4		47.9		59.9														
ZINC	7440-66-6	INO	38.6		49.6		168		83.6														
CYANIDE		INO	2.7	U	2.8	U	3	U	2.9	U													

LEGEND
INO – Inorganic
Q – Analytical results' Qualifier (listed below).
B – Analyte was detected above the CRDL but below 5X Blank Concentration.
J – The associated value is an estimated quantity.
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